MPPSC PRELIMS 2026

State Service Examination

GEOGRAPHY

Volume-3

Paper-I : General Studies

CHAPTERWISE MCQ BANK

- 3000+ MCQs with Full Explanation
- As per Syllabus released by MPPSC
- Specialised Study Material prepared by Experts

NODIA

Nodia

Scan QR for Demo PDF

GET ALL STUDY MATERIAL IN ONE APP!

- Textbooks
- Previous Year Chapterwise Question Banks
- 30 Sets Sample Papers
- Worksheets

FREE!

DOWNLOAD NOW!

SCAN & DOWNLOAD

GET IT ON Google Play

MPPSC
PRELIMS 2026

State Service Examination

Volume 3

GEOGRAPHY

Paper I : General Studies

CHAPTER-WISE MCQ BANK
As Per Syllabus Released By MPPSC

NODIA

Downloaded from www.pdf.tube

MPPSC PRELIMS GEOGRAPHY
Edition April 2026
Published by :NODIA
An Imprint of NODIA EDITIONS LLP

Information contained in this book has been obtained by author, from sources believes to be reliable. However, neither NODIA nor its author guarantee the accuracy or completeness of any information herein and NODIA nor its author shall be responsible for any error, omissions, or damages arising out of use of this information. This book is published with the understanding that NODIA and its author are supplying information but are not attempting to render engineering or other professional services.

© NODIA EDITIONS LLP

MRP ₹480.00

This book is available on amazon and flipkart only and not available in market.

NODIA EDITIONS LLP
125, Sector 6, Vidyadhar Nagar, Jaipur 302039
Phone :+91 9024037387
email : mail@nodia.in

CONTENTS

Part I : Geography of India

CHAP 01	Landforms of India : Mountains and Hills	7
CHAP 02	Plateaus, Rivers and Lakes	33
CHAP 03	Climate of India and Global Climate Phenomena	62
CHAP 04	Climate Change and Natural Disasters	91
CHAP 05	Natural Resources : Forests, Minerals and Water	121
CHAP 06	Energy Resources : Conventional and Non Conventional	147
CHAP 07	Agriculture, Food Security and Green Revolution	178
CHAP 08	Population Geography : Growth, Distribution and Migration	209

Part II : Geography of Madhya Pradesh

CHAP 09	Forests and Forest Produce	236
CHAP 10	Rivers, Hills and Plateaus	265
CHAP 11	Climate	292
CHAP 12	Soils and Mineral Resources	321
CHAP 13	Agriculture and Water Resources	349
CHAP 14	Energy Resources	380
CHAP 15	Industries	409
CHAP 16	Population and Urbanisation	439

****

Click Here to Buy book on Amazon

State Service (Preliminary) Examination
Syllabus

PAPER-I GENERAL STUDIES

1. **History of India**
   - Concepts and Ideas - Ancient Indian Knowledge Tradition, Bharatvarsha, Vedas, Upanishad, Aranyaka, Brahman Granth, Shaddarshan, Smritiyan, Rit Sabha-Samiti, Gantantra (Republic), Varnashrama, Purushartha, Rin Sanskara, Panch Mahayagya, Yagya, Principle of Karma, Bodhisatva, Teerthankar.
   - Salient features, Events and their administrative, Social and Economic Systems of Ancient and Medieval India.
   - India's cultural heritage- Artforms, literature, festivals and events.
   - Social and Religious Reform Movements in 19th and 20th century.
   - Independence Struggle and Indian National Movement.
   - Integration and Reorganization of India after Independence.

2. **History, Culture and Literature of Madhya Pradesh**
   - Major Events and Major Dynasties of Madhya Pradesh.
   - Contribution of Madhya Pradesh in Freedom Movement.
   - Major Arts and Sculpture of Madhya Pradesh.
   - Major Tribes and Dialects of Madhya Pradesh.
   - Major Festivals, Folk Music, Folk Arts and Folk literature of Madhya Pradesh.
   - Important literary Creators of Madhya Pradesh and their Literary Creations.
   - Major Tourist Places of Religious, Cultural and Archaeological Importance in Madhya Pradesh.
   - World Heritage sites in Madhya Pradesh.
   - Important Tribal Personalities of Madhya Pradesh.

3. **Geography of India**
   - Mountains, Hills, Plateaus, Rivers and Lakes.
   - Climate phenomena- El Nino, La Nina, Southern Oscillation, Western Disturbance, Consequences of Climate Change.
   - Natural Resources – Forest, Minerals, Water Resources.
   - Major Crops, Food Security, Green Revolution, Strategies for the Second Green Revolution.

NODIA

- Conventional and Non-Conventional sources of energy.
- Natural hazards and disasters in India, Major cyclones in India.
- Population growth, distribution and Density, Rural-Urban Migration.

4. **Geography of Madhya Pradesh**
   - Forest, Forest Produce, Rivers, Hills and Plateaus.
   - Climate - Seasons, Temperature, Rainfall.
   - Natural Resources- Soils and Major Mineral resources.
   - Major Crops, Water Resources, Irrigation and Irrigation Projects.
   - Conventional and Non-Conventional Sources of Energy.
   - Major Industries of Madhya Pradesh.
   - Population Growth, Distribution and Density, Urbanisation.

5. **Constitutional System of India and Madhya Pradesh**
   - Constituent Assembly.
   - Federal Executive, President and Parliament.
   - Supreme Court and Judicial System.
   - Constitutional Amendments.
   - Fundamental Rights and Duties of Citizens, Duties and Directive Principle of State.
   - National and Regional Constitutional/Statutory Commissions and Institutions.
   - Constitutional System of Madhya Pradesh (Governor, Cabinet, Legislative Assembly, High Court).
   - Three-Tier Panchayati Raj and Civil Administration system. in Madhya Pradesh
   - Good Governance in Madhya Pradesh (Governance System).

6. **Economy of India and Madhya Pradesh**
   - Corrent Situation of Madhya Pradesh in Indian Economy.
   - Population and Human Resources Development- Education, Health and Skills in Madhya Pradesh.
   - Progress in Sustainable Development Goals in Madhya Pradesh.
   - Development of Agriculture, Industry, MSME and Infrastructure Development in Madhya Pradesh.
   - Self-Reliant/Atma Nirbhar Madhya Pradesh, One District One Product (ODOP).
   - Progress of Intellectual Property Rights (IPR) in Madhya Pradesh.
   - Recent Trends in Indian Economy– Agriculture, Industry and Service sectors.
   - Financial Institutions– Reserve Bank, Commercial Banks, SEBI, Non-Banking Financial Institutions.
   - India's foreign Trade Policies G-20, SAARC and ASEAN.

Downloaded from www.pdf.tube

7. **Science, Environment and Health**
   - Preliminary Knowlegde of Main Branches of Science.
   - Important Indian Scientific Research Institutions and their Achievements.
   - Setellite and Space Technology Achivment of India in the Field of Space Science.
   - Structure of Human Body.
   - Nutrition, Food, Nutrient and Malnutrition.
   - Genetic Disease, Sickle Cell Anemia- Cause, Effect, Diagonosis and Program.
   - Health Policy and Programmes, Infectious disease and its Prevention and Health Indicator.
   - Concept of Sustainable Development and SDG's.
   - Environmental Factors, Biodiversity and Ecosystem.
   - Pollution, Natural Calamities and Management.

NODA

8. **International, National and Current Events of Madhya Pradesh**
   - International Current Events.
   - National Current Events.
   - Current Events of Madhya Pradesh.

9. **Information and Communication Technology**
   - Basic Knowledge of Computer.
   - Electronics, Information and Communication Technology.
   - Robotics, Artificial Intelligence and Cyber Security.
   - E-Governance.
   - Internet and Social Networking Platforms.

10. **Tribes of Madhya Pradesh- Heritage, Folk Culture and Folk Literature**
    - The Geographical distribution of the Tribes in Madhya Pradesh, Constitutional Provisions Related to Tribes.
    - Major Tribes of Madhya Pradesh, Particularly Vulnerable Tribal Groups (PVTG) and Tribal Welfare Programs.
    - Tribal Culture of Madhya Pradesh- Customs, Traditions, Special Arts Festivals, Dialects and Literature.
    - Madhya Pradesh Tribals' Contribution to the Freedom Movement of India and Tribal Personalities of Madhya Pradesh, Important Institutes, Museums and Publications related to tribes of Madhya Pradesh.
    - Folk Culture and Literature of Madhya Pradesh.

CHAPTER 01
Landforms of India : Mountains and Hills

1. The Zaskar range is situated between which of the following regions?
(A) Greater Himalayas and Lesser Himalayas
(B) Karakoram and Ladakh Range
(C) Pir Panjal and Dhauladhar Range
(D) Greater Himalayas and Ladakh Range

2. What is the highest peak of the Aravalli Range?
(A) Dhupgarh
(B) Dodabetta
(C) Guru Shikhar
(D) Anamudi

3. The Himalayas were formed from the accumulation and folding of sediments that were initially deposited in which ancient water body?
(A) Panthalassa Ocean
(B) Mediterranean Sea
(C) Tethys Sea
(D) Paleo-Brahmaputra Gulf

4. The Western Ghats are known by which local name in Maharashtra?
(A) Nilgiri
(B) Cardamom
(C) Sahyadri
(D) Palani

5. The Patkai Bum hills form the international boundary between India and which country?
(A) China
(B) Myanmar
(C) Bhutan
(D) Bangladesh

6. Which mountain range serves as the exact meeting point of the Western Ghats and the Eastern Ghats?
(A) Palani Hills
(B) Nilgiri Hills
(C) Anaimalai Hills
(D) Cardamom Hills

7. The geological formation of the Indian landmass is primarily attributed to the fragmentation and northward drift of which ancient supercontinent?
(A) Laurasia supercontinent
(B) Gondwanaland
(C) Pangaea landmass
(D) Baltica continent

8. The Zemu Glacier, one of the largest in the Eastern Himalayas, is the primary source of which significant river?
(A) Brahmaputra
(B) Teesta
(C) Kosi
(D) Manas

9. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R).
Assertion (A): The Satpura range is a classic example of a block mountain system.
Reason (R): It was formed due to the tectonic uplifting of land between the rift valleys of the Narmada and Tapti rivers.
Select the correct answer from the following options:
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

10. Which of the following is the defining characteristic of the Dhauladhar Range?
(A) Acts as the primary tectonic divide between the Indian and Eurasian plates.
(B) Consists entirely of active volcanoes located along the southern edge of India.
(C) Prominent range of the Lesser Himalayas situated in Himachal Pradesh.
(D) Forms the easternmost extension of the

Click Here to Buy book on Amazon

Purvanchal Hills near the Myanmar border.

11. Which is the highest peak in South India, located in the Anaimalai Hills?
(A) Dodabetta
(B) Kodaikanal
(C) Agasthyarkoodam
(D) Anamudi

12. Which of the following statements correctly defines the Trans-Himalayan zone?
(A) Southernmost edge of the Himalayas known for thick alluvial deposits.
(B) Continuous snow-covered peaks strictly marking the Nepal border.
(C) Zone north of Greater Himalayas composed of marine sedimentary rocks.
(D) Ancient block mountain system located parallel to the Aravalli range.

13. The Aravalli Range spans across which of the following sets of Indian states/UTs?
(A) Gujarat, Rajasthan, Haryana, Delhi
(B) Rajasthan, Madhya Pradesh, Uttar Pradesh, Delhi
(C) Gujarat, Maharashtra, Rajasthan, Punjab
(D) Rajasthan, Haryana, Punjab, Himachal Pradesh

14. Which of the following Himalayan passes connects the Kashmir Valley with the Kargil and Leh regions?
(A) Shipki La
(B) Nathu La
(C) Zoji La
(D) Bomdi La

15. The Eastern Ghats are characterized by their discontinuous nature primarily because:
(A) They were heavily glaciated during the ice age.
(B) They are young fold mountains constantly experiencing seismic activities.
(C) They are formed of highly soluble limestone.
(D) They have been deeply dissected by major east-flowing peninsular rivers.

16. Which of the following tectonic plates is responsible for the ongoing upliftment of the Himalayan mountain range?
(A) Indo-Australian and Eurasian Plates
(B) African and Eurasian Plates
(C) Indo-Australian and Pacific Plates
(D) Nazca and Indo-Australian Plates

17. Which is the highest peak of the Satpura Range, also being the highest point in Madhya Pradesh?
(A) Dhupgarh
(B) Amarkantak
(C) Kaimur
(D) Chauragarh

18. The famous Kashmir Valley lies between which two mountain ranges?
(A) Greater Himalayas and Pir Panjal
(B) Karakoram and Ladakh mountain ranges
(C) Zaskar and Greater Himalayan ranges
(D) Shivalik and the Dhauladhar range

19. The Vindhya Range acts predominantly as a geographical and cultural divide between which two regions?
(A) Eastern Ghats and Western Ghats
(B) Coastal Plains and the Deccan Plateau
(C) The Thar Desert and the Malwa Plateau
(D) Northern India and Peninsular India

20. Match List-I (Glacier) with List-II (Mountain Range/Region) and select the correct answer using the codes given below:
List I: (Glacier)
P. Siachen
Q. Gangotri
R. Zemu
S. Milam
List II: (Mountain Range/Region)
1. Sikkim Himalayas
2. Kumaon Himalayas
3. Karakoram Range
4. Greater Himalayas (Uttarakhand)
(A) P-3, Q-4, R-1, S-2
(B) P-1, Q-2, R-3, S-4
(C) P-3, Q-1, R-4, S-2
(D) P-4, Q-3, R-2, S-1

21. The highest peak of the Nilgiri Hills is:
(A) Anamudi
(B) Mahendragiri
(C) Dodabetta
(D) Arma Konda

Downloaded from www.pdf.tube

22. Identify the incorrect statement regarding the Karakoram Range.
(A) It forms India's borders with Afghanistan and China.
(B) It is part of the Greater Himalayas.
(C) It houses the K2 peak, the second-highest mountain in the world.
(D) It acts as a watershed between India and the Tarim Basin.

23. Which among the following hills is not a part of the Purvanchal Range?
(A) Patkai Bum
(B) Mizo Hills
(C) Naga Hills
(D) Javadi Hills

24. What does the term "Satpura" literally translate to, signifying its geographical structure?
(A) Snowy Peaks
(B) Southern Gate
(C) Divine Valleys
(D) Seven Mountains

25. Which mountain range is considered the oldest fold mountain system in India?
(A) Vindhyas
(B) Aravallis
(C) Himalayas
(D) Satpuras

26. Based on latitudinal division, which of the following is not a recognized parallel range of the Himalayas?
(A) Trans Himalaya
(B) Greater Himalaya
(C) Outer Himalaya
(D) Vindhyan Range

27. Identify the correct statement about the Western Ghats.
(A) They are structurally block mountains formed by the down-warping of the coast.
(B) They are highly broken and disjointed when compared directly to the Eastern Ghats.
(C) Their average elevation decreases continuously as one travels from north to south.
(D) They consist exclusively of metamorphic rocks formed during the Precambrian era.

NODIA

28. The Eastern Himalayas, covering Sikkim and Arunachal Pradesh, differ from the Western Himalayas primarily in which aspect?
(A) They have a lower snowline due to higher precipitation.
(B) They experience significantly lower levels of annual rainfall.
(C) They lack high-altitude peaks throughout the entire region.
(D) They are composed exclusively of volcanic basaltic formations.

29. Which prominent river valley separates the Vindhya Range from the Satpura Range?
(A) Godavari
(B) Tapti
(C) Narmada
(D) Mahanadi

30. Which pass holds immense strategic significance as the ancient Silk Route corridor connecting Sikkim with the Tibet Autonomous Region?
(A) Rohtang Pass
(B) Lipulekh Pass
(C) Bara Lacha La
(D) Nathu La

31. Where is the Nanda Devi peak located?
(A) Himachal Pradesh
(B) Jammu and Kashmir
(C) Uttarakhand
(D) Sikkim

32. The Bhander and Kaimur ranges act as a crucial water divide between which two river systems?
(A) Narmada and Tapti
(B) Son and Yamuna
(C) Ganga and Brahmaputra
(D) Godavari and Krishna

33. The Shivalik Hills are primarily composed of which type of geological material?
(A) Ancient crystalline and metamorphic rocks
(B) Unconsolidated fluvial sediments
(C) Basaltic lava flows from volcanoes
(D) Metamorphosed marble and limestone

34. Select the correct order of the following mountain ranges from North to South:
(A) Karakoram, Zaskar, Ladakh, Pir Panjal
(B) Karakoram, Ladakh, Zaskar, Pir Panjal

(C) Zaskar, Karakoram, Ladakh, Pir Panjal
(D) Ladakh, Karakoram, Zaskar, Pir Panjal

35. Which of the following statements best describes the impact of the Himalayan uplift on the Indian monsoon?
(A) It forces moisture-laden winds to shed heavy rain over the subcontinent.
(B) It weakened the monsoon winds leading to extreme aridity in North India.
(C) It redirected the moisture-bearing winds towards the Central Asian plains.
(D) It caused the formation of the complex El Nino effect in the Arabian Sea.

36. The highest peak of the Eastern Ghats is heavily debated, but which of the following is widely recognized as one of its highest points?
(A) Jindhagada Peak
(B) Anamudi Peak
(C) Guru Shikhar
(D) Kalsubai Peak

37. The Cardamom Hills form the southernmost extension of which mountain range?
(A) Western Ghats
(B) Eastern Ghats
(C) Vindhya Range
(D) Satpura Range

38. The snow line in the Eastern Himalayas is generally lower than in the Western Himalayas. Which factor is primarily responsible for this?
(A) Higher latitudinal positions of the Eastern Himalayan mountain range.
(B) Colder average temperatures in the east throughout the entire year.
(C) Large-scale deforestation occurring throughout the Western Himalayas.
(D) Higher precipitation and humidity levels in the Eastern Himalayas.

39. What is the geographical importance of Amarkantak in the Maikal Range?
(A) It serves as the highest point of the entire Vindhyan mountain system.
(B) It is a major volcanic crater lake formed during the Deccan Trap era.
(C) It is the only strategic pass connecting northern regions to the south.
(D) It is the radial origin for the Narmada, Son, and Johila rivers.

40. How do the Himalayas influence the climate of the Indian subcontinent during winter?
(A) They attract the dry, cold wind currents originating from the Arctic circle.
(B) They cause massive cyclonic disturbances in the northern Indian Ocean region.
(C) They reverse the seasonal flow of the southwest summer monsoon systems.
(D) They block cold central Asian winds from entering the Indian subcontinent.

41. The Western Ghats act as a major water divide. Which of the following rivers does not originate in the Western Ghats?
(A) Godavari
(B) Mahanadi
(C) Krishna
(D) Cauvery

42. Fold mountains are formed primarily due to which geological process?
(A) Recurring volcanic eruptions occurring over fixed crustal hotspots.
(B) Tensional forces causing block faulting and vertical displacement.
(C) Compressional tectonic forces leading to rock layer buckling.
(D) Extensive wind and water erosion occurring over millions of years.

43. The Kaimur Range is an eastward continuation of which major mountain system?
(A) Satpura Range
(B) Vindhya Range
(C) Aravalli Range
(D) Mahadeo Hills

44. Why is the Himalayan region classified as highly susceptible to earthquakes?
(A) It sits on a divergent tectonic plate boundary near the Indian Ocean.
(B) The region is filled with dormant volcanoes that are ready to erupt.
(C) Excessive dam construction has triggered deep-seated local fault lines.
(D) It is located along the active convergent boundary of tectonic plates.

Click Here to Buy book on Amazon

45. The Kumaon Himalayas are demarcated by which two rivers?
(A) Indus and Sutlej
(B) Kali and Teesta
(C) Sutlej and Kali
(D) Teesta and Dihang

46. Consider the following statements regarding the hills of Meghalaya:
I. They are structurally an eastward extension of the Peninsular Plateau.
II. They form part of the Himalayan fold mountain system.
III. They are divided into Garo, Khasi, and Jaintia hills.
Which of the combinations given above is correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II and III

47. The Asirgarh Pass, historically known as the 'Gateway to the Deccan', is located in which mountain range?
(A) Vindhya Range
(B) Satpura Range
(C) Western Ghats
(D) Eastern Ghats

48. The famous hill station of Darjeeling is situated in which part of the Himalayas?
(A) Kumaon Himalayas
(B) Sikkim-Darjeeling Himalayas
(C) Punjab Himalayas
(D) Purvanchal Himalayas

49. The Mahadeo Hills, an integral part of Madhya Pradesh's geography, are a sub-section of which mountain range?
(A) Satpura Range
(B) Vindhya Range
(C) Maikal Range
(D) Aravalli Range

50. Match List-I (Hill Station) with List-II (Mountain Range/State) and select the correct answer using the codes given below:
List I: (Hill Station)
P. Pachmarhi
Q. Ooty
R. Shimla
S. Munnar
List II: (Mountain Range/State)
1. Western Ghats (Kerala)
2. Satpura Range
3. Nilgiri Hills
4. Dhauladhar/Lesser Himalayas
(A) P-3, Q-2, R-1, S-4
(B) P-1, Q-3, R-4, S-2
(C) P-2, Q-3, R-4, S-1
(D) P-2, Q-4, R-3, S-1

NODIA

51. The Palani Hills are primarily situated in which Indian state?
(A) Kerala
(B) Karnataka
(C) Andhra Pradesh
(D) Tamil Nadu

52. Which of the following ranges in India is best classified as a residual or relict mountain?
(A) Greater Himalaya
(B) Zaskar Range
(C) Pir Panjal
(D) Aravalli Range

53. India's borders with Nepal and Bhutan are naturally demarcated by which physical feature?
(A) The arid Thar Desert region
(B) The fertile Ganga River Valley
(C) The Himalayan Mountain Range
(D) The rugged Purvanchal Hill system

54. Identify the odd one out based on mountain origin and structure.
(A) Himalayas
(B) Alps
(C) Satpuras
(D) Andes

55. Which of the following mountain ranges marks the northernmost boundary of the Deccan Plateau?
(A) Satpura
(B) Aravalli
(C) Nilgiri
(D) Kaimur

56. What is the geographical significance of the 'Duns' (like Dehradun)?
(A) Longitudinal valleys lying between the

Lesser Himalayas and the Shivaliks.
(B) High-altitude glacial lakes found primarily within the Trans-Himalayan zones.
(C) Volcanic craters and caldera formations discovered throughout the Eastern Ghats.
(D) Mangrove swamps and salt marshes located at the foothills of the Western Ghats.

57. Which of the following is not a recognized subdivision of the Himalayas?
(A) Malwa Himalayas
(B) Punjab Himalayas
(C) Kumaon Himalayas
(D) Assam Himalayas

58. The altitude-based zonation of mountain ecosystems implies that as altitude increases:
(A) Temperature drops, leading to transitions from tropical to alpine vegetation.
(B) Temperature increases significantly and natural vegetation becomes very sparse.
(C) Atmospheric pressure increases, supporting the growth of dense rainforests.
(D) Humidity levels rise continuously as one approaches the permanent snow line.

59. The Maikal Range forms a natural boundary between which two states?
(A) Madhya Pradesh and Maharashtra
(B) Madhya Pradesh and Uttar Pradesh
(C) Madhya Pradesh and Chhattisgarh
(D) Gujarat and Rajasthan

60. Slope instability and landslides in the Himalayas are severely aggravated by which natural phenomenon?
(A) Extreme and prolonged seasonal aridity
(B) Heavy rainfall on unconsolidated strata
(C) Coastal tidal waves and storm surges
(D) Sandstorms from the Tibetan plateau region

61. Permafrost zones in the Indian mountains are generally restricted to which of the following areas?
(A) The high peaks found throughout the Western Ghats range.
(B) The ancient and weathered Aravalli hill range systems.
(C) Higher elevations of the Trans and Greater Himalayas.
(D) The easternmost parts of the Shivalik mountain ranges.

62. The term 'Purvanchal' literally refers to the eastern mountains. Which among the following is not considered a dominant rock type of these hills?
(A) Basalt
(B) Sandstone
(C) Shale
(D) Quartzite

63. Which river marks the easternmost boundary of the Himalayas?
(A) Brahmaputra (Dihang)
(B) Teesta River
(C) Lohit River
(D) Subansiri River

64. Select the correct sequence of the prominent peaks of the Himalayas from West to East:
(A) Nanga Parbat, Nanda Devi, Mount Everest, Namcha Barwa
(B) Nanda Devi, Nanga Parbat, Mount Everest, Namcha Barwa
(C) Namcha Barwa, Mount Everest, Nanda Devi, Nanga Parbat
(D) Nanga Parbat, Mount Everest, Nanda Devi, Namcha Barwa

65. Which valley lies between the Greater Himalayas and the Zaskar range?
(A) Suru Valley
(B) Doon Valley
(C) Kullu Valley
(D) Kangra Valley

66. Consider the following statements regarding the hills of Northeast India:
I. The Garo, Khasi, and Jaintia hills are part of the Peninsular Plateau.
II. Patkai Bum forms the international boundary between India and Myanmar.
III. The Mizo hills were formerly known as the Lushai hills.
IV. Nokrek is the highest peak of the Khasi hills.
V. The Purvanchal hills consist largely of strong sandstone.
Which of the combinations given above is correct?
(A) I, II, III and V

Downloaded from www.pdf.tube

(B) II, III, IV and V
(C) I, III, IV and V
(D) I, II, IV and V

67. The Nilgiri Hills exhibit which distinct type of vegetation at their higher altitudes, locally known as 'Sholas'?
(A) Coastal mangrove forest ecosystems
(B) Tropical dry deciduous forest types
(C) Stunted tropical montane evergreen forests
(D) High-altitude alpine tundra vegetation

68. The hill station of Mount Abu is located in which mountain range?
(A) Vindhyas
(B) Aravallis
(C) Satpuras
(D) Western Ghats

69. Which mountain range is primarily responsible for the arid conditions in the Thar Desert by lying parallel to the path of the South-West monsoon winds?
(A) Aravallis
(B) Vindhyas
(C) Satpuras
(D) Shivaliks

70. Which state is home to the highest number of prominent Himalayan glaciers, including Gangotri, Yamunotri, and Milam?
(A) Himachal Pradesh
(B) Jammu and Kashmir
(C) Uttarakhand
(D) Sikkim

71. The Satpura range exhibits highest structural elevation in which of its constituent parts?
(A) Mahadeo Hills
(B) Rajpipla Hills
(C) Gawilgarh Hills
(D) Maikal Range

72. What distinguishes 'block mountains' from 'fold mountains'?
(A) Block mountains are formed by compression, while fold mountains are created by tension.
(B) Block mountains result from vertical faulting, whereas fold mountains result from buckling.
(C) Block mountains are primarily volcanic, while fold mountains are exclusively non-volcanic.
(D) Block mountains only exist under the sea, while fold mountains are purely continental.

73. Which of the following regions in Madhya Pradesh is characterized by the Vindhyan scarplands?
(A) Nimar plains
(B) Malwa plateau
(C) Bundelkhand region
(D) Rewa-Panna plateau

74. Which of the following mountain passes is located in Arunachal Pradesh?
(A) Bara Lacha La
(B) Shipki La
(C) Bomdi La
(D) Jelep La

75. The highest peak of the Khasi Hills in Meghalaya is:
(A) Nokrek
(B) Saramati
(C) Japvo
(D) Shillong Peak

NODIA

76. Which of the following hill ranges is known for being a major hub of biodiversity and endemic species in the Western Ghats?
(A) Nallamala Hills
(B) Erramala Hills
(C) Velikonda Range
(D) Agasthyamalai Range

77. Which of the following mountain ranges is characterized by a "steep western face" and a "gentle eastern slope"?
(A) Eastern Ghats
(B) Aravallis
(C) Vindhyas
(D) Western Ghats

78. The Great Boundary Fault separates which two geological structures in India?
(A) The Himalayas from the Indo-Gangetic plain
(B) The Western Ghats from the Deccan Plateau
(C) The Meghalaya plateau from the Purvanchal hills
(D) The Aravallis from the Vindhyan range

79. The famous 'Valley of Flowers' National Park is nestled in which part of the Himalayas?
(A) Zaskar Range
(B) Garhwal Himalayas
(C) Nepal Himalayas
(D) Assam Himalayas

80. Match List-I (Himalayan Range Division) with List-II (Average Elevation) and select the correct answer using the codes given below:
List I: (Himalayan Range Division)
P. Shivalik Range
Q. Lesser Himalaya
R. Greater Himalaya
S. Trans Himalaya
List II: (Average Elevation)
1. 6000 meters and above
2. 3700 to 4500 meters
3. 900 to 1100 meters
4. 3000 to 5000 meters (approx)
(A) P-1, Q-4, R-2, S-3
(B) P-3, Q-4, R-1, S-2
(C) P-2, Q-3, R-1, S-4
(D) P-3, Q-2, R-1, S-4

81. Identify the incorrectly matched pair of Pass and State.
(A) Shipki La - Himachal Pradesh
(B) Lipulekh - Uttarakhand
(C) Jelep La - Arunachal Pradesh
(D) Nathu La - Sikkim

82. The Panna Range, known for its diamond mines, is a part of which larger mountain system?
(A) Vindhya Range
(B) Aravalli Range
(C) Satpura Range
(D) Ajanta Range

83. What is the approximate length of the Himalayan mountain range from west to east?
(A) 1500 km
(B) 2400 km
(C) 3200 km
(D) 4500 km

84. The highest peak of the Andaman and Nicobar Islands, Saddle Peak, is structurally related to which mountain system?
(A) A structural extension of the Eastern Ghats range.
(B) A part of an independent submarine volcanic chain.
(C) An extension of the Purvanchal / Arakan Yoma hills.
(D) A structural extension of the Western Ghats range.

85. The Malwa Plateau is bordered on the south by which mountain range?
(A) Aravalli
(B) Satpura
(C) Vindhya
(D) Kaimur

86. Consider the following statements regarding the passes of the Western Ghats:
I. Thal Ghat connects Mumbai to Pune.
II. Bhor Ghat connects Mumbai to Nashik.
III. Pal Ghat is located between the Nilgiri and Anaimalai hills.
IV. Shencottah Gap connects Madurai to Kottayam.
Which of the combinations given above is incorrect?
(A) I and II only
(B) III and IV only
(C) I, II and IV only
(D) II, III and IV only

87. The famous hill resort of Kodaikanal is located on which hills?
(A) Nilgiri Hills
(B) Palani Hills
(C) Cardamom Hills
(D) Shevaroy Hills

88. Arrange the following hill ranges of the Eastern Ghats from North to South:
1. Nallamala Hills
2. Javadi Hills
3. Shevaroy Hills
4. Palkonda Range
Select the correct order using the options below:
(A) 1, 4, 2, 3
(B) 1, 2, 4, 3
(C) 4, 1, 3, 2
(D) 2, 3, 1, 4

89. The Main Boundary Thrust (MBT) separates which two distinct Himalayan zones?
(A) Trans Himalaya and Greater Himalaya

Click Here to Buy book on Amazon

(B) Lesser Himalaya and Shivalik
(C) Greater Himalaya and Lesser Himalaya
(D) Shivalik and the Indo-Gangetic Plains

90. Which of the following is the highest peak strictly located entirely within undisputed Indian territory?
(A) Nanda Devi
(B) K2 (Godwin Austen)
(C) Kangchenjunga
(D) Mount Everest

91. The term 'Karewas' refers to thick deposits of glacial clay and other materials. Which mountain region is famous for Karewa formations?
(A) Kumaon Himalayas
(B) Kashmir Himalayas
(C) Sikkim Himalayas
(D) Arunachal Himalayas

92. Which river gorge marks the physical boundary between the Himalayas and the Purvanchal hills?
(A) Indus Gorge
(B) Sutlej Gorge
(C) Brahmaputra (Dihang) Gorge
(D) Teesta Gorge

93. The Eastern Ghats merge with the Western Ghats at the Nilgiris. Which river valley broadly separates the Eastern Ghats from the northern reaches of the Western Ghats?
(A) The Godavari River valley system.
(B) The Tapti River valley region.
(C) No single river valley separates them.
(D) The Narmada River valley corridor.

94. What role do the Himalayas play in relation to the river systems of North India?
(A) They provide intermittent seasonal flow only during the monsoons.
(B) They cause rivers to flow entirely subterranean.
(C) They act as a perennial source of water due to melting glaciers.
(D) They divert all northern rivers into the Arabian Sea.

95. Which of the following sections of the Himalayas is situated between the Teesta and Dihang rivers?
(A) Punjab Himalayas
(B) Assam Himalayas
(C) Nepal Himalayas
(D) Kumaon Himalayas

96. Match List-I (Local Name of Western Ghats) with List-II (State) and select the correct answer using the codes given below:
List I: (Local Name of Western Ghats)
P. Sahyadri
Q. Nilgiri
R. Anaimalai
S. Cardamom
List II: (State)
1. Maharashtra
2. Tamil Nadu junction
3. Kerala border
4. Extreme southern tip of Kerala
(A) P-2, Q-1, R-4, S-3
(B) P-1, Q-2, R-3, S-4
(C) P-1, Q-3, R-2, S-4
(D) P-3, Q-2, R-1, S-4

NODIA

97. What is the approximate average elevation of the Greater Himalayas?
(A) 4500 meters
(B) 5000 meters
(C) 6100 meters
(D) 8000 meters

98. The phenomenon of mountain breezes occurring at night is primarily caused by:
(A) Rapid cooling of mountain slopes making air denser
(B) Excessive heating of valleys during the night
(C) Upward draft from forest transpiration
(D) Condensation of clouds at peaks

99. Consider the following statements regarding the geological features of Madhya Pradesh:
I. The Narmada river flows through a rift valley situated between the Vindhyas and Satpuras.
II. The Malwa plateau is composed primarily of Deccan trap basalt.
III. The Mahadeo hills form the easternmost extension of the Vindhyas.
IV. Amarkantak is the source of the Narmada and Son rivers.
Which of the combinations given above is incorrect?

(A) I and II only
(B) III only
(C) II and IV only
(D) I, III and IV only

100. The syntaxial bend in the Himalayas is responsible for the sharp southern turn of the mountains at both their eastern and western extremities. What features anchor these bends?
(A) K2 and Mount Everest
(B) Dhaulagiri and Kanchenjunga
(C) Nanga Parbat and Namcha Barwa
(D) Nanda Devi and Kamet

101. Which among the following is not a prominent peak of the Western Ghats?
(A) Malayagiri
(B) Kudremukh
(C) Pushpagiri
(D) Salher

102. Which among the following best describes the structural nature of the Meghalaya plateau?
(A) It is a massive block mountain isolated by the Malda fault.
(B) It is a young fold mountain range continuous with the Himalayas.
(C) It is an extensive volcanic plateau formed recently.
(D) It is an aeolian deposit of sand and silt.

103. The strategic importance of the Siachen Glacier relates to its location near the borders of which nations?
(A) India, China, and Nepal
(B) India, Pakistan, and China
(C) India, Bhutan, and China
(D) India, Pakistan, and Afghanistan

104. Which is the most valid reason for the presence of dense evergreen forests on the western slopes of the Western Ghats and dry deciduous forests on the eastern slopes?
(A) Difference in soil composition
(B) Intensive agriculture on the eastern slopes
(C) Glaciation effects on the western slopes
(D) The eastern slopes fall in the rain shadow region

105. Which of the following is a classic characteristic of residual mountains?
(A) High, sharp peaks with deep U-shaped valleys
(B) Active volcanic vents and fissure eruptions
(C) Gentle slopes with highly eroded, rounded summits
(D) Parallel ranges separated by broad, deep rifts

NODIA

106. Which of the following correctly pairs a state with its most prominent mountain range?
(A) Meghalaya - Shivaliks
(B) Rajasthan - Aravallis
(C) Madhya Pradesh - Purvanchal
(D) Kerala - Vindhyas

107. The term 'Bhabar' in the context of Indian mountain foothills refers to:
(A) A porous, gravel-ridden belt at the foothills of the Shivaliks
(B) A marshy, damp region supporting dense forests
(C) High-altitude alpine pastures
(D) The highly fertile older alluvium of the plains

108. Match List-I (Mountain Peak) with List-II (Mountain Range) and select the correct answer using the codes given below:
List I: (Mountain Peak)
P. Guru Shikhar
Q. Dhupgarh
R. Anamudi
S. K2
List II: (Mountain Range)
1. Karakoram Range
2. Western Ghats
3. Satpura Range
4. Aravalli Range
(A) P-4, Q-3, R-2, S-1
(B) P-3, Q-4, R-1, S-2
(C) P-4, Q-2, R-3, S-1
(D) P-1, Q-3, R-2, S-4

109. The Chotanagpur Plateau, although not a true mountain chain, features several hillocks. The Rajmahal Hills located on its eastern edge are primarily formed of:
(A) Glacial till
(B) Coral deposits
(C) Marine limestone
(D) Basaltic lava flows

110. Consider the following statements regarding the Shivalik Hills:
I. They are the youngest and southernmost range of the Himalayas.
II. They have an average altitude exceeding 3000 meters.
III. They are prone to severe soil erosion and landslides due to loose strata.
Which of the combinations given above is correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II and III

111. The 'Himalayan Frontal Fault' (HFF) forms the boundary between the Shivalik range and the:
(A) Lesser Himalayas
(B) Greater Himalayas
(C) Trans Himalayas
(D) Indo-Gangetic Plains

112. Saramati is the highest peak of which of the following hill ranges?
(A) Mizo Hills
(B) Naga Hills
(C) Garo Hills
(D) Jaintia Hills

113. Which among the following forces primarily causes structural degradation of ancient fold mountains like the Aravallis over geological time?
(A) Volcanic eruptions
(B) Tectonic uplift
(C) Denudation and weathering
(D) Magma intrusion

114. The structural dip of the Peninsular plateau, as indicated by the flow of major rivers like Godavari and Krishna, is towards:
(A) North-West
(B) South-West
(C) North-East
(D) South-East

115. Which of the following states does not host a part of the Aravalli Range?
(A) Gujarat
(B) Haryana
(C) Rajasthan
(D) Punjab

116. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R).
Assertion (A): The Western Ghats cause heavy orographic rainfall on the western coastal plains.
Reason (R): They act as a physical barrier to the moisture-laden south-west monsoon winds coming from the Arabian Sea.
Select the correct answer from the following options:
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

117. Which geological division of India is considered the most stable landmass, relatively free from frequent severe earthquakes?
(A) The Himalayan region
(B) The Indo-Gangetic plain
(C) The Purvanchal hills
(D) The Peninsular plateau

118. The hill station of Pachmarhi in Madhya Pradesh is situated at an elevation of approximately 1,067 meters. It is located in:
(A) Kaimur Range
(B) Rajpipla Hills
(C) Gavilgarh Hills
(D) Mahadeo Hills

119. Which pass facilitates land trade between India and China through Uttarakhand?
(A) Lipulekh Pass
(B) Nathu La
(C) Bomdi La
(D) Zoji La

120. Which of the following is an example of a mountain pass carved by the river Sutlej?
(A) Shipki La
(B) Rohtang Pass
(C) Banihal Pass
(D) Bara Lacha La

Downloaded from www.pdf.tube

121. Which mountain range separates the drainage basin of the Indus River system from that of the Ganga River system?
(A) Ambala ridge/Aravalli extensions
(B) Karakoram Range
(C) Vindhya Range
(D) Pir Panjal Range

122. The Indian tourism industry relies heavily on hill stations like Shimla, Mussoorie, and Nainital. These hill stations are primarily located in which Himalayan zone?
(A) Trans Himalayas
(B) Greater Himalayas
(C) Shivaliks
(D) Lesser Himalayas

123. The highest peak of the Vindhya range, often referred to as Sadbhawna Shikhar or Good-will Peak, is situated in which district of Madhya Pradesh?
(A) Hoshangabad
(B) Panna
(C) Damoh
(D) Rewa

124. The term 'Dun' translates to longitudinal valleys. In which state is the famous Patli Dun located?
(A) Himachal Pradesh
(B) Uttarakhand
(C) Jammu and Kashmir
(D) Sikkim

125. The ecological importance of the hills of Northeast India is highlighted by the presence of:
(A) Extensive coral reef ecosystems found near the coastline.
(B) Desert and scrubland biodiversity in low precipitation zones.
(C) Dense tropical rainforests and biodiversity hotspots.
(D) Large contiguous mangrove forests within tidal river deltas.

126. Arrange the following mountain ranges of Madhya Pradesh from West to East:
1. Rajpipla Hills
2. Mahadeo Hills
3. Maikal Range

Select the correct order using the options below:
(A) 1, 2, 3
(B) 3, 2, 1
(C) 2, 1, 3
(D) 1, 3, 2

127. Consider the following statements regarding the Himalayas:
I. They form an arc spanning approximately 2400 kilometers.
II. Their width is greater in Arunachal Pradesh than in Kashmir.
III. The Greater Himalayas have an asymmetrical fold structure.
IV. The core of the Greater Himalayas is composed of granite.
V. They were unaffected by the Pleistocene ice ages.

Which of the combinations given above is correct?
(A) I, II and III
(B) I, III and IV
(C) II, IV and V
(D) I, IV and V

128. The Zaskar range, due to its remote location and high altitude, features a climate best described as:
(A) Tropical monsoon
(B) Subtropical highland
(C) Humid continental
(D) Cold desert

129. The difference between Old fold mountains and Young fold mountains is best exemplified by comparing the:
(A) Western Ghats and Eastern Ghats
(B) Aravallis and Himalayas
(C) Vindhyas and Satpuras
(D) Nilgiris and Anaimalai hills

130. The Gondwana rock system, historically famous for coal deposits in India, is most prominently associated with river valleys near which mountain ranges?
(A) Satpuras and Vindhyas (Peninsular plateau valleys)
(B) Aravallis
(C) Western Ghats
(D) Himalayas

NODIA

ANSWERS

1. (D) Greater Himalayas and Ladakh Range
The Zaskar Range is a prominent mountain range in the Trans-Himalayan region. It lies to the south of the Ladakh Range and north of the Greater Himalayas. This range acts as a significant climatic barrier, separating the lush Kashmir Valley and Jammu from the arid, high-altitude cold deserts of Ladakh and Tibet, influencing regional weather patterns.

2. (C) Guru Shikhar
Guru Shikhar is the highest point of the Aravalli Range, reaching an elevation of 1,722 meters above sea level. Located in the Mount Abu region of Rajasthan, it provides a commanding view of the surrounding landscape. The peak is geologically significant as it belongs to one of the world's oldest fold mountain systems, which is now largely eroded.

3. (C) Tethys Sea
The Himalayas originated from the Tethys Sea, an ancient ocean that existed between the Gondwanaland and Laurasia supercontinents. Around fifty million years ago, the northward movement of the Indian plate caused the oceanic sediments to compress and fold. This tectonic collision eventually uplifted the sea floor, creating the world's highest and youngest mountain range system in South Asia.

4. (C) Sahyadri
In Maharashtra and Karnataka, the Western Ghats are traditionally known as the Sahyadri mountain range. This massive continuous chain of hills runs parallel to the western coast of the Indian peninsula. It plays a crucial role in the Indian monsoon by intercepting moisture-laden winds, resulting in heavy rainfall on the windward side and supporting diverse and complex ecological systems.

5. (B) Myanmar
The Patkai Bum hills are part of the Purvanchal Range in Northeast India. They serve as a natural international boundary between India and Myanmar. These hills are characterized by conical peaks, steep slopes, and deep valleys. Geologically, they were formed by the same tectonic processes as the Himalayas but are much lower in elevation and are densely forested.

6. (B) Nilgiri Hills
The Nilgiri Hills, often called the Blue Mountains, serve as the geographic junction where the Western Ghats and Eastern Ghats meet. Located at the tri-junction of Tamil Nadu, Kerala, and Karnataka, these hills form a high plateau. They are known for their unique biodiversity, including the Shola forests, and contain several peaks exceeding two thousand meters in elevation.

7. (B) Gondwanaland
The Indian landmass was originally part of the southern supercontinent known as Gondwanaland. This ancient landmass included present-day South America, Africa, Antarctica, and Australia. Roughly one hundred million years ago, the Indian plate broke away and drifted northward across the Tethys Sea. Its eventual collision with the Eurasian plate resulted in the formation of the massive Himalayan mountain range.

8. (B) Teesta
The Zemu Glacier is the largest glacier in the Eastern Himalayas, located at the base of Kangchenjunga in Sikkim. It serves as the primary source for the Teesta River, which is the lifeline of Sikkim and North Bengal. The glacier is approximately twenty-six kilometers long and plays a vital role in maintaining the perennial flow of the river system.

9. (A) Both A and R are true and R is the correct explanation of A.
The Satpura Range is a classic example of block mountains, characterized by uplifted land segments known as horsts. These mountains formed through tectonic activity where the crust was pushed upward between two parallel faults. The surrounding rift valleys of the Narmada and Tapti rivers represent the sunken blocks

Click Here to Buy book on Amazon

or grabens, which directly explains the range's complex structural origin.

10. (C) Prominent range of the Lesser Himalayas situated in Himachal Pradesh.
The Dhauladhar Range is a significant mountain chain within the Lesser Himalayan zone, primarily located in Himachal Pradesh. It is known for its distinct granite composition and its proximity to the Kangra Valley. The range rises abruptly from the plains, with its snow-capped peaks forming a dramatic backdrop for famous hill stations such as Dharamshala and McLeod Ganj.

11. (D) Anamudi
Anamudi, located in the Idukki district of Kerala, is the highest peak in South India and the Western Ghats. Standing at an elevation of 2,695 meters, it is situated within the Anaimalai Hills. The name translates to "elephant's forehead" in Malayalam, reflecting its physical shape. It is a center of high biodiversity and a prominent feature of Eravikulam National Park.

12. (C) Zone north of Greater Himalayas composed of marine sedimentary rocks.
The Trans-Himalayan zone is located immediately north of the Greater Himalayas. It consists of ranges like the Karakoram, Ladakh, and Zaskar. Geologically, it contains marine sedimentary rocks that were part of the Tethys Sea floor before tectonic uplift. This region is characterized by high-altitude plateaus and a cold desert climate with minimal vegetation compared to the southern mountain ranges.

13. (A) Gujarat, Rajasthan, Haryana, Delhi
The Aravalli Range is one of the oldest mountain systems in the world, stretching approximately 800 kilometers. It begins in Gujarat near Palanpur, extends across the entire length of Rajasthan, passes through southern Haryana, and terminates at the Raisina Hill in Delhi. This range acts as a critical barrier preventing the eastward expansion of the Thar Desert into fertile plains.

14. (C) Zoji La
Zoji La is a high mountain pass in the Himalayas, situated at an altitude of approximately 3,528 meters. It serves as a vital link connecting the Kashmir Valley with the high-altitude regions of Kargil and Leh in Ladakh. Due to heavy snowfall, the pass often remains closed during winter, though the construction of a tunnel aims to provide year-round connectivity.

15. (D) They have been deeply dissected by major east-flowing peninsular rivers.
Unlike the continuous Western Ghats, the Eastern Ghats are broken and irregular. This lack of continuity is primarily due to the erosional activities of large, east-flowing rivers such as the Mahanadi, Godavari, Krishna, and Cauvery. These rivers have carved wide valleys through the range over millions of years as they flow toward the Bay of Bengal from the Deccan Plateau.

16. (A) Indo-Australian and Eurasian Plates
The ongoing upliftment of the Himalayas is a result of the continuous collision between the Indo-Australian Plate and the Eurasian Plate. This convergent boundary creates intense pressure, causing the Earth's crust to fold and rise. Because the Indo-Australian Plate continues to move northward at a rate of several centimeters per year, the mountain range remains tectonically active and growing.

17. (A) Dhupgarh
Dhupgarh is the highest peak in the Satpura Range and the state of Madhya Pradesh, reaching an altitude of 1,350 meters. It is located near the hill station of Pachmarhi in the Mahadeo Hills. The peak is a popular tourist destination, especially for viewing sunsets and sunrises, and it marks the structural culmination of this significant block mountain system.

18. (A) Greater Himalayas and Pir Panjal
The Kashmir Valley is a large intermontane basin situated between the Greater Himalayas to the northeast and the Pir Panjal Range to the southwest. Formed by the lacustrine deposits of the ancient Lake Karewa, the valley is famous for its scenic beauty and fertile land. This tectonic depression is drained by the Jhelum River and its various mountain tributaries.

19. (D) Northern India and Peninsular India
The Vindhya Range is a complex of mountain ridges and hill ranges that runs roughly parallel to the Narmada River. It serves as a traditional and

NODIA

geographic divide between Northern India and the Peninsular Plateau. Geologically, it consists of sedimentary rocks and forms the southern edge of the Malwa Plateau, influencing the drainage patterns of several major North Indian rivers.

20. (A) P-3, Q-4, R-1, S-2
Siachen is located in the Karakoram Range, while Gangotri originates in the Greater Himalayas of Uttarakhand. Zemu is found in the Sikkim Himalayas, and Milam is situated in the Kumaon region. These glaciers are essential for the perennial flow of India's major rivers. Correctly identifying their regional locations is fundamental for understanding the glaciology and hydrology of the Himalayas.

21. (C) Dodabetta
Dodabetta is the highest peak in the Nilgiri Hills, standing at an elevation of 2,637 meters. It is located near Ooty in Tamil Nadu and is the second-highest peak in South India after Anamudi. The summit is accessible by road and offers panoramic views of the surrounding hills, which are characterized by montane grasslands and stunted tropical evergreen Shola forests.

22. (B) It is part of the Greater Himalayas.
The Karakoram Range is distinct from the Himalayas and is classified as part of the Trans-Himalayan system. While it lies adjacent to the Himalayas, it has a separate geological history and structure. It contains many of the world's highest peaks, including K2, and serves as a major watershed between the Indus River basin and the interior drainage basins of Central Asia.

23. (D) Javadi Hills
The Javadi Hills are part of the Eastern Ghats, located in the state of Tamil Nadu. In contrast, the Patkai Bum, Naga Hills, and Mizo Hills are all components of the Purvanchal Range in Northeast India. The Purvanchal mountains are young fold mountains formed by the same tectonic forces as the Himalayas, whereas the Eastern Ghats are much older and fragmented.

24. (D) Seven Mountains
The name "Satpura" is derived from Sanskrit, where "Sat" means seven and "Pura" means mountains or folds. This refers to the seven parallel ridges that constitute the range. Stretching across Central India, the Satpura system consists of the Rajpipla Hills, Mahadeo Hills, and the Maikal Range, forming a significant watershed between the Narmada and Tapti river valleys.

25. (B) Aravallis
The Aravalli Range is recognized as the oldest fold mountain system in India and one of the oldest in the world. Formed during the Proterozoic era, these mountains were once as high as the Himalayas but have been significantly worn down by hundreds of millions of years of weathering and erosion. Today, they exist primarily as relict or residual hill ranges.

26. (D) Vindhyan Range
The Himalayas are characterized by three primary parallel longitudinal ranges: the Greater Himalayas (Himadri), the Lesser Himalayas (Himachal), and the Outer Himalayas (Shivaliks). The Trans-Himalayas lie to the north. The Vindhyan Range, however, is located in Central India and is part of the Peninsular Plateau. It has a completely different geological origin and age compared to the Himalayan system.

27. (A) They are structurally block mountains formed by the down-warping of the coast.
The Western Ghats are not true fold mountains; rather, they are the faulted edge of the Deccan Plateau. They were formed during the breakup of Gondwanaland when the western coast of the Indian subcontinent subsided or warped downward into the Arabian Sea. This geological process created a steep, wall-like escarpment that rises sharply from the narrow western coastal plains.

28. (A) They have a lower snowline due to higher precipitation.
The Western Himalayas have a lower snowline compared to the Eastern Himalayas due to their higher latitude. While the Eastern Himalayas receive significantly higher annual rainfall from the Bay of Bengal, the higher temperatures associated with their lower latitude result in a higher snowline. Consequently, the snowline in the West is found at lower elevations compared to the Eastern Himalayas.

Downloaded from www.pdf.tube

29. (C) Narmada
The Narmada River flows through a prominent rift valley that separates the Vindhya Range to the north from the Satpura Range to the south. This rift was formed by tectonic faulting within the Indian plate. The river flows westward, eventually draining into the Arabian Sea. This structural depression is a major geographical feature of Central India, defining the regional topography.

30. (D) Nathu La
Nathu La is a strategic mountain pass in the Himalayas that connects the Indian state of Sikkim with the Tibet Autonomous Region of China. Historically, it served as a branch of the ancient Silk Route, facilitating trade and cultural exchange. Located at an altitude of 4,310 meters, it remains an important border crossing point between the two neighboring nations.

31. (C) Uttarakhand
Nanda Devi is the second-highest mountain in India and the highest peak located entirely within the country's borders. It is situated in the Garhwal region of Uttarakhand. The peak is surrounded by the Nanda Devi National Park, which is a UNESCO World Heritage site known for its unique high-altitude flora, fauna, and spectacular alpine scenery throughout the year.

32. (B) Son and Yamuna
The Bhander and Kaimur ranges are eastern extensions of the Vindhya mountain system. These ranges act as a crucial water divide, separating the drainage basin of the Son River to the south from the basin of the Yamuna River and its tributaries to the north. This geographical feature determines the flow direction of various perennial and seasonal streams in Central India.

33. (B) Unconsolidated fluvial sediments
The Shivalik Hills, or Outer Himalayas, are the youngest part of the Himalayan system. They are primarily composed of unconsolidated sediments like gravel, sand, and clay, which were brought down by rivers from the higher Himalayan ranges. Because these materials are not yet fully compacted into hard rock, the Shivaliks are highly prone to soil erosion and frequent landslides.

34. (B) Karakoram, Ladakh, Zaskar, Pir Panjal
From north to south, the primary mountain ranges in the northwestern part of India are the Karakoram, followed by the Ladakh Range, then the Zaskar Range, and finally the Pir Panjal Range. The first three belong to the Trans-Himalayan and Greater Himalayan zones, while the Pir Panjal is part of the Lesser Himalayas, forming the boundary of the Kashmir Valley.

35. (A) It forces moisture-laden winds to shed heavy rain over the subcontinent.
The Himalayas act as a massive physical barrier to the moisture-laden southwest monsoon winds. As these winds strike the high mountain walls, they are forced to rise, leading to cooling and heavy orographic precipitation over the Indian subcontinent. Without this range, much of the moisture would pass into Central Asia, potentially leaving North India as an arid desert.

36. (A) Jindhagada Peak
Jindhagada Peak, located in the Araku Valley of Andhra Pradesh, is recognized as the highest point of the Eastern Ghats, reaching an elevation of 1,690 meters. While various peaks have been cited historically, current topographical data identifies Jindhagada as the tallest. It is part of the fragmented and weathered mountain system that runs parallel to India's eastern coast.

NODIA

37. (A) Western Ghats
The Cardamom Hills are the southernmost part of the Western Ghats, located in southeast Kerala and southwest Tamil Nadu. They are named after the spice that is extensively cultivated in the region's cool, moist climate. These hills are contiguous with the Anaimalai Hills to the north and play a vital role in capturing rainfall from the monsoon seasons.

38. (D) Higher precipitation and humidity levels in the Eastern Himalayas.
The snow line is the altitude above which snow remains throughout the year. In the Western Himalayas, the snow line is lower than in the Eastern Himalayas. While heavy precipitation and high humidity occur in the East, the higher latitude and colder temperatures of the Western Himalayas allow snow to persist at significantly lower altitudes than in the Eastern Himalayas.

39. (D) It is the radial origin for the Narmada, Son, and Johila rivers.
Amarkantak, situated in the Maikal Range of Madhya Pradesh, is a unique geographical site where multiple rivers originate. It serves as the source of the Narmada River, which flows west, the Son River, which flows north to join the Ganga, and the Johila River. This radial drainage pattern makes Amarkantak a significant hydrological hub and a sacred pilgrimage site.

40. (D) They block cold central Asian winds from entering the Indian subcontinent.
During winter, the Himalayas serve as an effective thermal barrier that prevents extremely cold, dry winds from Central Asia and Siberia from entering the Indian subcontinent. By blocking these frigid air masses, the mountains help maintain much milder temperatures in North India than would otherwise occur at those latitudes, protecting the region's agriculture and biodiversity from freezing conditions.

41. (B) Mahanadi
The Mahanadi River originates in the highlands of Chhattisgarh, specifically in the Sihawa range of the Raipur district, which is part of the Peninsular plateau but not the Western Ghats. In contrast, the Godavari, Krishna, and Cauvery rivers all have their headwaters in the Western Ghats, flowing eastward across the Deccan Plateau to drain into the Bay of Bengal.

42. (C) Compressional tectonic forces leading to rock layer buckling.
Fold mountains are created when two tectonic plates collide, exerting immense horizontal compressional forces on the Earth's crust. This pressure causes the sedimentary rock layers between the plates to buckle and fold upward, forming high peaks and ridges. The Himalayas and the Alps are classic examples of young fold mountains formed through this complex process of tectonic collision and shortened crust.

43. (B) Vindhya Range
The Kaimur Range is the easternmost extension of the Vindhya mountain system. It stretches across Madhya Pradesh, Uttar Pradesh, and Bihar. The range is characterized by steep escarpments and plateau surfaces. It forms a significant watershed between the rivers flowing into the Ganga in the north and the Son River valley situated to its immediate south in Central India.

44. (D) It is located along the active convergent boundary of tectonic plates.
The Himalayan region is highly prone to earthquakes because it lies on the active convergent boundary where the Indian Plate is pushing into the Eurasian Plate. This ongoing collision accumulates massive amounts of tectonic stress in the crust. When this stress is suddenly released through fault movements, it results in powerful seismic events, making the region geologically unstable.

45. (C) Sutlej and Kali
Based on regional divisions, the Kumaon Himalayas are located between the Sutlej River in the west and the Kali River in the east. This section lies primarily in the state of Uttarakhand. It is famous for containing high peaks such as Nanda Devi and Trishul, as well as being the source of major rivers like the Ganga and Yamuna.

46. (C) I and III only
The hills of Meghalaya, consisting of the Garo, Khasi, and Jaintia ranges, are geologically an extension of the ancient Peninsular Plateau of India. They are not part of the Himalayan fold mountain system. They were separated from the Chotanagpur Plateau by the Malda Fault. These hills are known for receiving some of the highest rainfall in the entire world.

47. (B) Satpura Range
The Asirgarh Pass is located in the Satpura Range of Madhya Pradesh. Historically known as the "Gateway to the Deccan," it was a strategically vital pass connecting North India to the Deccan Plateau. A massive fort stands atop a hill overlooking the pass, which has seen numerous military campaigns throughout history because of its importance as a major southern transport route.

48. (B) Sikkim-Darjeeling Himalayas
Darjeeling is a prominent hill station situated in the Sikkim-Darjeeling section of the Himalayas, located in the northern part of West Bengal. This region is characterized by steep slopes and high rainfall, making it ideal for tea cultivation.

Click Here to Buy book on Amazon

It lies south of the Sikkim border and provides spectacular views of the Kangchenjunga massif, the third-highest mountain in the world.

49. (A) Satpura Range
The Mahadeo Hills are a significant central part of the Satpura Range in Madhya Pradesh. They are located to the east of the Rajpipla Hills and west of the Maikal Range. These hills contain the highest point of the Satpuras, Dhupgarh, and are famous for the hill station of Pachmarhi, which is surrounded by deep gorges, waterfalls, and ancient caves.

50. (C) P-2, Q-3, R-4, S-1
Pachmarhi is situated in the Satpura Range of Madhya Pradesh. Ooty is located in the Nilgiri Hills of Tamil Nadu. Shimla is part of the Lesser Himalayas in Himachal Pradesh, and Munnar is found in the Western Ghats of Kerala. These hill stations are renowned for their distinct climates and local topography, reflecting the diversity of India's mountains.

51. (D) Tamil Nadu
The Palani Hills are an eastward extension of the Western Ghats, located primarily in the Dindigul district of Tamil Nadu. They are home to the famous hill station of Kodaikanal. These hills are known for their high-altitude montane grasslands and Shola forests. Geologically, they consist of ancient charnockite rocks and support various endemic species of flora and fauna in the region.

52. (D) Aravalli Range
The Aravalli Range is classified as a residual or relict mountain because it is the eroded remains of an ancient, much higher mountain system. Millions of years of wind and water erosion have lowered its height, leaving behind rounded hills and isolated peaks. Unlike the young, growing Himalayas, the Aravallis have ceased active tectonic uplift and are steadily worn down.

53. (C) The Himalayan Mountain Range
The high peaks and rugged terrain of the Himalayan Mountain Range form a natural and formidable physical boundary between India and its northern neighbors, Nepal and Bhutan. This mountain wall has historically influenced trade, culture, and political relations. The range serves as a major watershed and a climatic divide, separating the Indian subcontinent from the vast Tibetan Plateau.

54. (C) Satpuras
The Himalayas, Alps, and Andes are all classic examples of young fold mountains formed by the collision of tectonic plates. In contrast, the Satpuras are block mountains, created by the vertical displacement of the Earth's crust along fault lines. This structural difference in origin—compression for fold mountains versus faulting for block mountains—makes the Satpura Range unique in this group.

55. (A) Satpura
The Satpura Range forms the northernmost boundary of the Deccan Plateau. Running parallel to the Vindhya Range, it separates the Narmada and Tapti rivers. To the north of the Satpuras lies the Narmada rift valley, while to the south lies the main expanse of the plateau. This range consists of several hills, including the Rajpipla, Mahadeo, and the Maikal ranges.

56. (A) Longitudinal valleys lying between the Lesser Himalayas and the Shivaliks.
Duns are narrow longitudinal valleys situated between the Lesser Himalayas and the Outer Himalayas. They were formed when rivers were temporarily blocked by the rising Shivalik range, leading to the accumulation of silt and gravel. Once the rivers breached the range, the lakes drained, leaving behind fertile, flat-bottomed valleys. Dehradun and Patli Dun are well-known examples of such geographical formations.

57. (A) Malwa Himalayas
The Himalayas are traditionally divided regionally into the Punjab, Kumaon, Nepal, and Assam Himalayas based on river boundaries. There is no such division as the "Malwa Himalayas." Malwa refers to a plateau region in Central India, primarily within Madhya Pradesh, which is part of the Peninsular Plateau and is geologically older and completely separate from the Himalayan mountain system.

58. (A) Temperature drops, leading to transitions from tropical to alpine vegetation.
As altitude increases in mountain ecosystems, the air temperature decreases. This climatic change

Downloaded from www.pdf.tube

results in distinct vertical zones of vegetation. At the foothills, one might find tropical forests, which transition into temperate forests, then coniferous forests, and finally alpine meadows and tundra near the snow line. This zonation allows mountains to host a wide variety of plant and animal species.

59. (C) Madhya Pradesh and Chhattisgarh
The Maikal Range forms the eastern part of the Satpura system and serves as a natural boundary between the states of Madhya Pradesh and Chhattisgarh. It is a plateau-like range that includes the Amarkantak plateau, the source of several major rivers. The range is characterized by dense forests and is home to various tribal communities, contributing to the region's rich biodiversity.

60. (B) Heavy rainfall on unconsolidated strata
The Himalayas are geologically young and consist of relatively loose rock and soil, particularly in the Shivalik range. During the monsoon, heavy and prolonged rainfall saturates these layers, increasing their weight and reducing internal friction. This instability leads to frequent landslides and slope failures, which are further exacerbated by the steep terrain and ongoing tectonic activity in the entire mountain region.

61. (C) Higher elevations of the Trans and Greater Himalayas.
Permafrost, or permanently frozen ground, is found in India only at very high altitudes where temperatures remain below freezing for most of the year. Such conditions are restricted to the high peaks and plateaus of the Trans-Himalayas and the Greater Himalayas, such as in Ladakh and high Sikkim. Lower ranges like the Aravallis or Western Ghats do not reach these temperatures.

62. (A) Basalt
The Purvanchal Hills in Northeast India are primarily composed of sedimentary rocks like sandstone, shale, and quartzite, which were folded during the Himalayan orogeny. Basalt, an igneous rock formed from cooled lava, is not a dominant feature of these mountains. Instead, basalt is the primary component of the Deccan Traps in the Peninsular Plateau, far from the eastern border mountains.

63. (A) Brahmaputra (Dihang)
The Brahmaputra River, known as the Dihang in Arunachal Pradesh, marks the easternmost limit of the Himalayan mountain range. At this point, the mountains take a sharp southward turn, a feature known as the syntaxial bend, and continue as the Purvanchal hills. This deep gorge carved by the river defines the physical end of the east-west oriented Himalayan chain in India.

64. (A) Nanga Parbat, Nanda Devi, Mount Everest, Namcha Barwa
Moving from west to east along the Himalayan arc, the sequence of prominent peaks begins with Nanga Parbat in Pakistan-administered Kashmir. This is followed by Nanda Devi in Uttarakhand, India. Continuing eastward, the sequence reaches Mount Everest on the Nepal-China border and finally concludes with Namcha Barwa in Tibet, near the great bend of the Brahmaputra River in Arunachal Pradesh.

65. (A) Suru Valley
The Suru Valley is a high-altitude valley in the Ladakh region, situated between the Greater Himalayan range and the Zaskar Range. It is known for its rugged beauty and serves as a significant agricultural zone in the cold desert. The valley is drained by the Suru River and provides a vital transport link toward the Zanskar region and Kargil in Ladakh.

66. (A) I, II, III and V
The Garo, Khasi, and Jaintia hills are part of the Peninsular Plateau, while Patkai Bum forms the India-Myanmar border. The Mizo hills were historically called the Lushai hills, and the Purvanchal range is characterized by strong sandstone formations. However, Nokrek is the highest peak of the Garo hills, not the Khasi hills, making the fourth statement in the question incorrect.

67. (C) Stunted tropical montane evergreen forests
Sholas are unique high-altitude forest ecosystems found in the Nilgiri Hills and other parts of the Western Ghats. They consist of stunted tropical montane evergreen trees separated by vast undulating grasslands. These forests are typically found in the sheltered valleys and folds of the mountains. They are vital for water conservation

NODIA

and host numerous endemic plant and animal species in South India.

68. (B) Aravallis
Mount Abu is the only hill station in Rajasthan and is located in the Aravalli Range. It is situated on a high rocky plateau near the border with Gujarat. The area is famous for its cool climate, lush green forests, and the Dilwara Jain Temples. It also contains Guru Shikhar, the highest peak of the entire Aravalli mountain system in the state.

69. (A) Aravallis
The Aravalli Range runs in a southwest-to-northeast direction, which is parallel to the path of the moisture-laden southwest monsoon winds coming from the Arabian Sea. Because the winds do not strike the mountains at an angle, they pass over the region without shedding much rain. This lack of orographic precipitation is a major factor in the extreme aridity of the Thar Desert.

70. (C) Uttarakhand
Uttarakhand is home to some of the most significant glaciers in the Himalayas, including Gangotri, the source of the Bhagirathi, and Yamunotri, the source of the Yamuna. Other major glaciers like Milam and Pindari are also located here. These ice masses are essential reservoirs of freshwater, feeding the perennial river systems that support millions of people across the North Indian plains.

71. (A) Mahadeo Hills
The Satpura Range reaches its highest structural elevation in the Mahadeo Hills, located in central Madhya Pradesh. This section contains the range's highest peak, Dhupgarh, which stands at 1,350 meters. The Mahadeo Hills are characterized by sandstone formations and deep valleys. They represent the core of the Satpura system and are geographically situated between the Rajpipla Hills and Maikal Range.

72. (B) Block mountains result from vertical faulting, whereas fold mountains result from buckling.
Block mountains are created when large areas of the Earth's crust are broken and displaced vertically along fault lines. This process results in uplifted blocks and sunken blocks. In contrast, fold mountains are formed by the horizontal compression and buckling of sedimentary rock layers during the collision of tectonic plates. The Satpuras are block mountains, while the Himalayas are fold mountains.

73. (D) Rewa-Panna plateau
The Rewa-Panna plateau in Madhya Pradesh is characterized by the prominent Vindhyan scarplands. These are steep, cliff-like slopes that mark the edge of the plateau where the resistant sedimentary rock layers of the Vindhya Range drop down toward the plains. This rugged topography has significantly influenced the local drainage, resulting in several waterfalls where rivers descend from the higher plateau surfaces.

74. (C) Bomdi La
Bomdi La is a high mountain pass located in the West Kameng district of Arunachal Pradesh. It connects the state with Lhasa in Tibet. The pass is situated at an elevation of over 2,200 meters and is of great strategic and commercial importance. It offers a route through the eastern Himalayas and is surrounded by lush forests and diverse local cultures.

75. (D) Shillong Peak
Shillong Peak is the highest point in the Khasi Hills and the entire state of Meghalaya, standing at an altitude of 1,965 meters. It offers a magnificent view of the city of Shillong and the surrounding countryside. While Nokrek is the highest peak of the Garo Hills, Shillong Peak remains the dominant geographic feature of the central Khasi hill region in Meghalaya.

76. (D) Agasthyamalai Range
The Agasthyamalai Range, located at the southern end of the Western Ghats between Kerala and Tamil Nadu, is a major biodiversity hotspot. It is home to the Agasthyamalai Biosphere Reserve, which contains a high concentration of endemic plant and animal species. Its unique geographical position and high rainfall support diverse forest types, ranging from evergreen to montane grasslands and meadows.

77. (D) Western Ghats
The Western Ghats exhibit a classic asymmetric profile with a very steep, cliff-like western face and a long, gentle slope toward the east. This structure is due to the faulting and subsidence of the western coast during the breakup of

Click Here to Buy book on Amazon

Gondwanaland. As a result, rivers originating here flow mostly eastward across the Deccan Plateau rather than toward the nearby Arabian Sea coast.

78. (D) The Aravallis from the Vindhyan range
The Great Boundary Fault is a major tectonic feature in Rajasthan that separates the ancient Aravalli Range from the younger Vindhyan sedimentary sequence. This fault zone runs for several hundred kilometers and marks the boundary where these two distinct geological provinces meet. It has played a significant role in the structural evolution and the current landscape of the southeastern part of Rajasthan.

79. (B) Garhwal Himalayas
The 'Valley of Flowers' National Park is nestled in the Garhwal region of the Himalayas in Uttarakhand. It is a UNESCO World Heritage site renowned for its meadows of endemic alpine flowers and diverse flora. Situated at a high altitude, the valley is accessible only during the summer months when the snow melts, revealing a vibrant and colorful natural landscape.

80. (D) P-3, Q-2, R-1, S-4
The Shivaliks are the lowest range with an average elevation of 900 to 1,100 meters. The Lesser Himalayas range from 3,700 to 4,500 meters. The Greater Himalayas consist of the highest peaks, averaging above 6,000 meters. The Trans-Himalayas, including the Tibetan plateau region, typically average between 3,000 and 5,000 meters. These elevation zones define the mountain system's diverse topography.

81. (C) Jelep La - Arunachal Pradesh
Jelep La is actually located in the state of Sikkim, not Arunachal Pradesh. It connects Sikkim with the Chumbi Valley in Tibet. Other pairs are correct: Shipki La is in Himachal Pradesh, Lipulekh is in Uttarakhand, and Nathu La is also in Sikkim. Correctly identifying these passes is crucial for understanding the geography and logistics of the high Himalayan border regions.

82. (A) Vindhya Range
The Panna Range is a part of the larger Vindhya mountain system in Madhya Pradesh. It is geologically significant for its diamond-bearing kimberlite pipes, making it the only active diamond mining region in India. The range is characterized by a series of plateaus and escarpments and is also home to the Panna National Park, a vital habitat for many animal species.

83. (B) 2400 km
The Himalayan mountain range spans approximately 2,400 kilometers in length, forming a massive arc across South Asia. It stretches from the Indus River in the west to the Brahmaputra River in the east. This vast distance covers several countries and Indian states, influencing regional climates, river systems, and biodiversity across a significant portion of the entire South Asian continent.

84. (C) An extension of the Purvanchal / Arakan Yoma hills.
Saddle Peak is the highest point in the Andaman and Nicobar Islands. Structurally, the island chain is considered an underwater extension of the Arakan Yoma mountain range of Myanmar, which is itself part of the broader Purvanchal and Himalayan mountain systems. These islands represent the exposed summits of a massive submarine mountain chain formed by complex tectonic activity in the region.

85. (C) Vindhya
The Malwa Plateau is bordered on its southern edge by the Vindhya Range. This range consists of a series of hills and escarpments that separate the plateau from the Narmada River valley. The Vindhyas act as a watershed, with rivers to its north flowing toward the Ganga and Yamuna, while the Narmada flows independently toward the west into the Arabian Sea.

86. (A) I and II only
Thal Ghat connects Mumbai to Nashik, while Bhor Ghat connects Mumbai to Pune. These are correctly identified as vital links in the Western Ghats. Pal Ghat is situated between the Nilgiri and Anaimalai hills, and the Shencottah Gap connects Madurai to Kottayam. Correctly identifying these pairings is essential for understanding the transport geography of the Western Ghats.

NODIA

87. (B) Palani Hills
The hill resort of Kodaikanal is located in the Palani Hills of Tamil Nadu. Known as the "Princess of Hill Stations," it sits at an elevation of about 2,133 meters. These hills are an eastward extension of the Western Ghats. The region is characterized by high-altitude lakes, pine forests, and unique Shola ecosystems, making it a popular destination for tourism and research.

88. (A) 1, 4, 2, 3
In the Eastern Ghats, the correct North-to-South order begins with the Nallamala Hills in Andhra Pradesh. Moving south, one encounters the Palkonda Range, also in Andhra Pradesh. Continuing further south into Tamil Nadu, the sequence passes through the Javadi Hills and finally the Shevaroy Hills. This fragmented arrangement is a result of erosion by large rivers flowing toward the Bay of Bengal.

89. (B) Lesser Himalaya and Shivalik
The Main Boundary Thrust is a major geological fault line that separates the Lesser Himalayas from the Outer Himalayas. This thrust zone is a key structural feature reflecting the tectonic history of the Himalayas. Understanding these faults is essential for studying the mountain range's ongoing uplift and the seismic activity that occurs as the Indian plate continues its northward movement into Eurasia.

90. (A) Nanda Devi
Nanda Devi is the highest peak situated entirely within undisputed Indian territory. While K2 is higher, it is located in Pakistan-administered Kashmir, and Kangchenjunga lies on the border between India and Nepal. Standing at 7,816 meters in Uttarakhand, Nanda Devi is a sacred mountain and the center of a national park and biosphere reserve recognized for its outstanding natural beauty.

91. (B) Kashmir Himalayas
Karewas are thick lacustrine deposits of glacial clay and other materials found in the Kashmir Valley. They were formed during the Pleistocene epoch when the valley was occupied by a vast lake. These plateau-like landforms are highly fertile and are famous for the cultivation of saffron, almonds, and walnuts, making them an important geographical and economic feature of the mountain region.

92. (C) Brahmaputra (Dihang) Gorge
The deep gorge of the Brahmaputra River, known as the Dihang Gorge in Arunachal Pradesh, marks the physical boundary where the east-west Himalayan range ends. At this location, the mountain system takes a sharp, southward turn known as the syntaxial bend. South of this gorge, the mountains are known as the Purvanchal Hills, which run along India's eastern border with Myanmar.

93. (C) No single river valley separates them.
There is no single continuous river valley that separates the Eastern Ghats from the northern reaches of the Western Ghats. Instead, these two mountain systems are part of the same Peninsular Plateau structure. While they meet at the Nilgiri Hills in the south, the vast Deccan Plateau lies between them in the north, drained by multiple river systems like the Godavari.

94. (C) They act as a perennial source of water due to melting glaciers.
The Himalayas play a crucial role in maintaining the perennial flow of North India's major rivers, such as the Ganga, Indus, and Brahmaputra. These rivers are fed by the melting of vast mountain glaciers and snowfields throughout the year. This constant supply of water is vital for agriculture, industry, and the livelihoods of hundreds of millions of people living downstream.

95. (B) Assam Himalayas
The section of the Himalayas located between the Teesta River in the west and the Dihang River in the east is known as the Assam Himalayas. This region covers parts of Sikkim, West Bengal, Bhutan, and Arunachal Pradesh. It is characterized by high rainfall, dense forests, and several high peaks, representing the easternmost segment of the main Himalayan mountain chain.

96. (B) P-1, Q-2, R-3, S-4
The Western Ghats are known as the Sahyadri in Maharashtra. The Nilgiri Hills are situated at the junction of Tamil Nadu, Karnataka, and Kerala. The Anaimalai Hills are located along the Kerala border, while the Cardamom Hills are found at the extreme southern tip of the peninsula in

Downloaded from www.pdf.tube

Kerala. These local names reflect the regional and cultural significance of the range.

97. (C) 6100 meters
The Greater Himalayas represent the highest and most continuous range of the Himalayan system. Its average elevation is approximately 6,100 meters above sea level. This range contains many of the world's tallest peaks, including Mount Everest and Kangchenjunga. Due to its extreme altitude, the range remains perpetually covered in snow and hosts numerous large glaciers that feed many major rivers.

98. (A) Rapid cooling of mountain slopes making air denser
Mountain breezes occur at night when mountain slopes cool down rapidly due to terrestrial radiation. The air in contact with the slopes becomes cooler and denser than the air in the valley below. This heavy, dense air then flows down the slopes into the valley. This localized wind pattern is a common feature of mountain climates and affects nocturnal temperatures in valleys.

99. (B) III only
The third statement is incorrect because the Mahadeo Hills are a part of the Satpura Range, not the Vindhya Range. The other statements are accurate: the Narmada flows through a rift valley between the Vindhyas and Satpuras, the Malwa plateau is largely Deccan trap basalt, and Amarkantak is indeed the source of both the Narmada and Son rivers in Madhya Pradesh.

100. (C) Nanga Parbat and Namcha Barwa
The Himalayas exhibit two major syntaxial bends where the mountain range turns sharply southward. The western bend is anchored by Nanga Parbat in the Kashmir region, while the eastern bend is anchored by Namcha Barwa in Tibet, near the border with Arunachal Pradesh. These bends are caused by the interaction of colliding tectonic plates at their extreme eastern and western edges.

101. (A) Malayagiri
Malayagiri is a prominent peak located in the state of Odisha and is part of the Eastern Ghats, not the Western Ghats. In contrast, Kudremukh and Pushpagiri are well-known peaks in the Western Ghats of Karnataka, and Salher is a high peak in the Sahyadri range of Maharashtra. Distinguishing between the peaks of the two mountain systems is essential for regional geography.

102. (A) It is a massive block mountain isolated by the Malda fault.
The Meghalaya plateau is geologically an outlier of the ancient Peninsular Plateau. It is a massive block mountain that was separated from the Chotanagpur Plateau by the formation of the Malda fault during the Himalayan orogeny. The region consists of the Garo, Khasi, and Jaintia hills and is characterized by a high plateau surface and some of the highest rainfall.

103. (B) India, Pakistan, and China
The Siachen Glacier is located in the eastern Karakoram Range and is of immense strategic importance because it lies near the intersection of the borders of India, Pakistan, and China. Known as the world's highest battlefield, it overlooks critical transit routes and high mountain passes. Control over this region is vital for monitoring regional movements and ensuring national security for all.

104. (D) The eastern slopes fall in the rain shadow region
The Western Ghats intercept moisture-laden monsoon winds, causing heavy orographic rainfall on their western slopes, which supports dense evergreen forests. As the winds cross the peaks and descend on the eastern side, they become warmer and drier. This creates a rain shadow effect, leading to lower precipitation. Consequently, the eastern slopes can only support dry deciduous forests or scrub vegetation.

105. (C) Gentle slopes with highly eroded, rounded summits.
Residual mountains are the remnants of ancient mountain systems that have been significantly worn down by millions of years of denudation and weathering. Their characteristic features include relatively low elevations, gentle slopes, and rounded summits, rather than sharp, jagged peaks. The Aravalli Range in India is a classic example of such a relict landform, showing the long-term effects of geological erosion.

NODIA

106. (B) Rajasthan - Aravallis
The Aravalli Range is the most prominent mountain system in Rajasthan, stretching across the state and influencing its climate and geography. Other options are incorrect: the Shivaliks are in the Himalayas, not Meghalaya; the Purvanchal hills are in Northeast India, not Madhya Pradesh; and the Vindhyas are in Central India, whereas Kerala is home to the Western Ghats and Anaimalai hills.

107. (A) A porous, gravel-ridden belt at the foothills of the Shivaliks
Bhabar is a narrow geographical belt located at the immediate foothills of the Shivalik range. It is composed of heavy deposits of gravel and unassorted pebbles brought down by Himalayan rivers. Due to the high porosity of this rocky soil, smaller streams often disappear underground in this zone, only to re-emerge further south in the marshy and damp Terai region.

108. (A) P-4, Q-3, R-2, S-1
Guru Shikhar is the highest peak of the Aravalli Range. Dhupgarh is the tallest point in the Satpura Range. Anamudi is the highest peak of the Western Ghats, and K2 is the highest peak in the Karakoram Range. These peaks represent the structural culminations of their respective mountain systems across different regions of the Indian subcontinent and are geologically very significant.

109. (D) Basaltic lava flows
The Rajmahal Hills, located in eastern Jharkhand, are primarily formed from ancient basaltic lava flows that occurred during the Jurassic period. These hills represent an early stage of volcanic activity that preceded the much larger Deccan Trap eruptions. Over time, weathering has shaped these volcanic rocks into a series of hills and plateaus that mark the northeastern edge of the peninsula.

110. (C) I and III only
The Shivalik Hills are the youngest and southernmost range of the Himalayas, formed by the accumulation of river sediments. Because they consist of loose, unconsolidated strata, they are highly prone to soil erosion and landslides. However, they are the lowest Himalayan range, with average altitudes typically between 900 and 1,100 meters, making the second statement in the question incorrect.

111. (D) Indo-Gangetic Plains
The Himalayan Frontal Fault is the southernmost major fault system of the Himalayas. It marks the boundary between the rising Shivalik range and the flat, alluvial Indo-Gangetic Plains. This fault is tectonically active, representing the leading edge of the Himalayan mountain-building process. It is a critical feature for understanding the seismic risk and geological transition from mountains to the plains.

112. (B) Naga Hills
Saramati is the highest peak of the Naga Hills, situated on the border between the Indian state of Nagaland and Myanmar. Reaching an elevation of 3,826 meters, it remains snow-capped during the winter. The peak is part of the Purvanchal Range and is a significant landmark, offering views of the surrounding hills and the Chindwin River valley in neighboring Myanmar.

113. (C) Denudation and weathering
Ancient fold mountains like the Aravallis have been subjected to hundreds of millions of years of denudation, which includes the combined processes of weathering and erosion. Wind, water, and temperature changes gradually break down the rock and carry it away. This continuous natural process has transformed what were once massive, high peaks into the low, rounded hills and relict ranges today.

114. (D) South-East
The Peninsular plateau of India has a general structural dip toward the southeast. This tilt is clearly demonstrated by the flow direction of major rivers like the Godavari, Krishna, and Cauvery, which originate in the Western Ghats and flow across the entire width of the plateau to drain into the Bay of Bengal. This drainage pattern is a fundamental geographic characteristic.

115. (D) Punjab
The Aravalli Range stretches from Gujarat through Rajasthan and Haryana, ending in Delhi. It does not pass through the state of Punjab. This mountain system is crucial for Rajasthan's geography, acting as a barrier to the desert. In contrast, Punjab's landscape is primarily

Click Here to Buy book on Amazon

dominated by the fertile alluvial plains of the Indus river system and the low northern Shivalik foothills.

116. (A) Both A and R are true and R is the correct explanation of A.
The Western Ghats stand as a continuous vertical wall parallel to the western coast. When moisture-laden southwest monsoon winds arrive from the Arabian Sea, they are forced to rise over these mountains. This upward movement causes the air to cool and condense, leading to heavy orographic rainfall. Thus, the physical barrier provided by the mountains directly explains the specific precipitation pattern.

117. (D) The Peninsular plateau
The Peninsular plateau is geologically the oldest and most stable part of the Indian landmass. It is composed of ancient crystalline rocks that have remained relatively undisturbed by major tectonic upheavals for millions of years. Unlike the young, seismically active Himalayas or the sediment-filled Indo-Gangetic plains, this region is generally free from frequent and severe earthquakes, acting as a rigid shield.

118. (D) Mahadeo Hills
Pachmarhi, the only hill station in Madhya Pradesh, is located in the Mahadeo Hills, which are a central part of the Satpura Range. Known as the Queen of Satpura, it is situated at an elevation of about 1,067 meters. The area is famous for its rich biodiversity, ancient rock shelters, and scenic waterfalls, all set within a rugged sandstone mountain landscape.

119. (A) Lipulekh Pass
Lipulekh Pass is located in the Vyas Valley of Uttarakhand, near the tri-junction of India, Nepal, and China. It is a significant mountain pass used for trade between India and the Tibet region. Additionally, it is a primary route for pilgrims undertaking the Kailash Mansarovar Yatra. Its location in the high Himalayas makes it strategically and culturally important for connectivity.

120. (A) Shipki La
Shipki La is a high mountain pass on the India-China border in Himachal Pradesh. It is geologically significant because it was carved by the Sutlej River as it cuts through the Himalayan ranges from its source in Tibet. The pass serves as a historical trade route and is a prime example of an antecedent river carving a deep gorge through rising mountains.

NODIA

121. (A) Ambala ridge/Aravalli extensions
The drainage basin of the Indus River system is separated from that of the Ganga River system by a subtle upland known as the Ambala ridge. This feature, which is an underground extension of the Aravalli Range, acts as a primary water divide in North India. It determines whether rivers flow westward into the Arabian Sea or eastward toward the Bay of Bengal.

122. (D) Lesser Himalayas
Most of the famous Indian hill stations, including Shimla, Mussoorie, Nainital, and Ranikhet, are located in the Lesser Himalayan range. This range is characterized by moderate altitudes, usually between 3,700 and 4,500 meters, and a pleasant climate. These features, combined with rugged topography and beautiful valleys, have made the Lesser Himalayas the primary hub for mountain tourism in India.

123. (C) Damoh
The highest peak of the Vindhya range, known as Sadbhawna Shikhar or Goodwill Peak, is located in the Damoh district of Madhya Pradesh. It stands at an elevation of approximately 752 meters. While the Vindhyas are generally lower than the Satpuras, this peak represents their structural high point. The surrounding region is part of the Rewa-Panna plateau, characterized by resistant sedimentary rocks.

124. (B) Uttarakhand
Patli Dun is a well-known longitudinal valley located within the Jim Corbett National Park in the state of Uttarakhand. Like other Duns, it was formed between the Lesser Himalayas and the Shivalik range. These valleys are characterized by their flat bottoms and fertile soil. Patli Dun is particularly famous for its rich wildlife and scenic beauty, serving as a vital ecological zone.

125. (C) Dense tropical rainforests and biodiversity hotspots.
The hills of Northeast India, including the Purvanchal and Meghalaya plateau, are

ecologically significant due to their dense tropical rainforests. This region is part of the Indo-Burma biodiversity hotspot, hosting a vast array of unique plant and animal species. High rainfall and varying altitudes create diverse habitats that support rare orchids and endangered primates, making it a globally important conservation area.

126. (A) 1, 2, 3
In Madhya Pradesh, the mountain ranges of the Satpura system are arranged from west to east starting with the Rajpipla Hills near the Gujarat border. This is followed by the Mahadeo Hills in the central part of the state, which contain the highest peak, Dhupgarh. Finally, the sequence ends with the Maikal Range on the eastern side near the Chhattisgarh border.

127. (B) I, III and IV
The Himalayas form a 2,400-kilometer arc and have an asymmetrical fold structure, with their core composed of ancient granite. Their width is much greater in Kashmir (400 km) than in Arunachal Pradesh (150 km). Furthermore, they were significantly shaped by glaciation during the Pleistocene epoch. These characteristics define the complex geography of the range.

128. (D) Cold desert
The Zaskar Range experiences a cold desert climate because of its high altitude and location in the rain shadow of the Greater Himalayas. The range blocks moisture from the monsoon, resulting in extremely low precipitation and very cold temperatures. The landscape is characterized by barren rocky terrain, sparse vegetation, and long, harsh winters, similar to conditions in the neighboring Ladakh plateau.

129. (B) Aravallis and Himalayas
The contrast between old and young fold mountains is best seen by comparing the Aravallis and the Himalayas. The Aravallis are an ancient, highly eroded relict range formed hundreds of millions of years ago. In contrast, the Himalayas are young fold mountains, created much more recently by ongoing tectonic collisions. They possess high, jagged peaks and continue to rise over time.

NODIA

130. (A) Satpuras and Vindhyas (Peninsular plateau valleys)
The Gondwana rock system is primarily associated with the river valleys found within the Peninsular plateau, particularly near the Satpura and Vindhya ranges. These rocks were deposited in structural troughs along the Damodar, Son, Mahanadi, and Godavari river valleys. They are of immense economic importance because they contain over ninety-eight percent of India's coal reserves, formed from ancient plant matter.

www.nodia.in

CHAPTER 02
Plateaus, Rivers and Lakes

1. Which of the following rock types is the primary constituent of the Deccan Trap region?
(A) Granite
(B) Schist
(C) Quartzite
(D) Basalt

2. The Garo, Khasi, and Jaintia hills are sub-divisions of which major geological structure?
(A) Purvanchal Himalayas
(B) Chota Nagpur Plateau
(C) Meghalaya Plateau
(D) Eastern Ghats

3. Which of the following statements correctly distinguishes a dissected plateau from other types?
(A) It is formed by the sudden uplift of land mass due to tectonic activity in the crust.
(B) It is completely enclosed by high mountain ranges on all sides of the geographic area.
(C) It is characterized by severe erosion from rivers and wind.
(D) It is composed primarily of alternating layers of sandstone and limestone rock types.

4. Which of the following rivers serves as a major drainage basin for the Telangana Plateau?
(A) Mahanadi
(B) Yamuna
(C) Godavari
(D) Brahmaputra

5. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R):
Assertion (A): The Malwa plateau is deeply dissected by rivers forming extensive ravines.
Reason (R): The plateau is predominantly drained by the Chambal river system which creates massive gully erosion.
Select the correct answer from the codes below:
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

6. Which drainage pattern resembles the branches of a tree and is typically found in flat terrain with uniform rock structure?
(A) Trellis
(B) Dendritic
(C) Radial
(D) Rectangular

7. Which of the following best defines an intermontane plateau?
(A) A plateau formed by extensive volcanic fissure eruptions
(B) A plateau completely or partially enclosed by mountain ranges
(C) A plateau formed by the continuous erosion of surrounding highlands
(D) A plateau situated at the foot of a mountain range bordering an ocean

8. Which river system prominently divides the Chota Nagpur Plateau into the Hazaribagh plateau and the Ranchi plateau?
(A) Subarnarekha
(B) Damodar
(C) Koel
(D) Barakar

9. The Baba Budan Hills, famous for iron ore deposits, are located in which plateau?
(A) Chota Nagpur Plateau
(B) Karnataka Plateau
(C) Meghalaya Plateau
(D) Telangana Plateau

10. Find the odd one out among the following geographical features located within or forming the boundary of the Deccan Plateau.
(A) Western Ghats

Downloaded from www.pdf.tube

(B) Eastern Ghats
(C) Aravalli Range
(D) Satpura Range

11. Which of the following best defines antecedent drainage?
(A) A river that changes its course due to heavy silt deposition.
(B) A river that flows underground in deep limestone terrain zones.
(C) A river that forms solely during the intensive monsoon seasons.
(D) A river that maintains its course despite tectonic uplift.

12. Match List I with List II and select the correct answer using the codes given below:
List I: (Plateau Type)
P. Lava Plateau
Q. Dissected Plateau
R. Intermontane Plateau
S. Piedmont Plateau
List II: (Example)
1. Tibetan Plateau
2. Patagonian Plateau
3. Scottish Highlands
4. Deccan Plateau
Codes:
(A) P-4, Q-3, R-1, S-2
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-1, R-2, S-3
(D) P-3, Q-4, R-1, S-2

13. Consider the following statements regarding the Meghalaya Plateau:
I. It is an eastern extension of the Peninsular plateau.
II. It is separated from the main peninsular block by the Malda fault.
III. It was formed predominantly by recent tectonic uplift of the Himalayas.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II, and III

14. Which of the following rivers does not originate from or drain the Malwa Plateau?
(A) Chambal
(B) Betwa
(C) Mahanadi
(D) Mahi

15. What term describes a drainage pattern where rivers flow outward from a central highland?
(A) Trellis
(B) Centripetal
(C) Dendritic
(D) Radial

16. The Deccan Plateau of India is predominantly classified under which category based on its geological formation?
(A) Lava Plateau
(B) Dissected Plateau
(C) Intermontane Plateau
(D) Piedmont Plateau

NODIA

17. Identify the correct statement regarding the Telangana Plateau.
(A) It has a semi-arid climate with Dharwar and Cuddapah rocks.
(B) It is primarily drained by the Narmada and Tapti river systems.
(C) It consists of recent alluvial deposits found in deltaic zones.
(D) It features extensive tropical evergreen forests in high rainfall.

18. The step-like topography of the Deccan Trap was formed due to which of the following geological processes?
(A) Successive fissure eruptions of basic lava during the Cretaceous.
(B) Intense glacial erosion and frost action during the Pleistocene.
(C) Continuous folding and faulting of the southern peninsular block.
(D) Deposition of sediments by ancient pre-Himalayan river systems.

19. Which geological feature separates the Meghalaya Plateau from the Chota Nagpur Plateau?
(A) Great Boundary Fault
(B) Himalayan Frontal Thrust
(C) Narmada Rift Valley
(D) Malda Gap

20. The Chota Nagpur Plateau is geologically renowned for possessing immense reserves of which of the following resources?
(A) Coal and Iron Ore
(B) Petroleum and Natural Gas
(C) Uranium and Thorium
(D) Diamond and Gold

21. The Amarkantak plateau is a classic example of which drainage pattern due to the origin of rivers like Narmada and Son?
(A) Dendritic
(B) Trellis
(C) Radial
(D) Parallel

22. The geological significance of the Deccan Trap lava flows lies primarily in the formation of which economically important soil type?
(A) Alluvial Soil
(B) Black Cotton Soil
(C) Laterite Soil
(D) Red and Yellow Soil

23. What is the predominant drainage pattern observed in the northern part of the Malwa Plateau?
(A) Radial
(B) Trellis
(C) Centripetal
(D) Dendritic

24. Which of the following forms the boundary between the Karnataka Plateau and the Telangana Plateau?
(A) Godavari River
(B) Narmada River
(C) Cauvery River
(D) Tungabhadra River

25. Identify the incorrect statement regarding the Chota Nagpur Plateau.
(A) It consists predominantly of Gondwana rocks.
(B) It receives lower rainfall compared to the adjoining Gangetic plains.
(C) The region is characterized by extensive tribal populations like the Santhals and Mundas.
(D) Parasnath is the highest peak in this plateau region.

26. Identify the correct statement regarding the physical characteristics of the Deccan Plateau.
(A) Its general slope is from east to west
(B) It consists entirely of sedimentary rock formations
(C) Its elevation is highest in the eastern section and tapers towards the west
(D) It is bounded by the Satpura and Vindhya ranges to the north

27. Consider the following plateaus of India:
I. Malwa Plateau
II. Karnataka Plateau
III. Telangana Plateau
IV. Chota Nagpur Plateau
Which of the following represents the correct sequence from North to South?
(A) I, IV, III, II
(B) IV, I, III, II
(C) I, III, IV, II
(D) IV, III, I, II

28. The Malwa Plateau is situated between which of the following two prominent mountain ranges?
(A) Aravalli and Vindhya
(B) Vindhya and Satpura
(C) Satpura and Ajanta
(D) Aravalli and Sahyadri

29. Consider the following statements regarding the Karnataka Plateau:
Statement I: The Karnataka Plateau is historically classified into two regions known as Malnad and Maidan.
Statement II: Malnad is characterized by rolling plains while Maidan consists of highly dissected hilly terrain.
Which of the following is correct?
(A) Statement I is true, Statement II is false
(B) Statement I is false, Statement II is true
(C) Both statements are true
(D) Both statements are false

30. Which statement best describes the slope of the Malwa Plateau based on its drainage direction?
(A) It slopes from north to south
(B) It slopes from east to west
(C) It slopes towards the center forming an inland drainage system
(D) It slopes from south to north

Click Here to Buy book on Amazon

31. The Ganga river shifts its course and deposits massive amounts of silt in its lower reaches. This is primarily the cause of:
(A) Formation of deep mountain gorges.
(B) Creation of the tectonic Malda gap.
(C) Formation of the Sundarbans delta.
(D) Formation of extensive rift valleys.

32. Which of the following is the most appropriate description of the Kosi river?
(A) A stable, peninsular river characterized by its clear waters.
(B) A destructive antecedent river known as the "Sorrow of Bihar".
(C) A westward flowing river creating an estuary in coastal Gujarat.
(D) A tributary of the Indus system that flows entirely within India.

33. Match List I with List II and select the correct answer using the codes given below:
List I: (River System)
P. Indus
Q. Narmada
R. Ganga
S. Godavari
List II: (Characteristic/Origin)
1. Rift Valley Flow
2. Antecedent River
3. Largest Peninsular Basin
4. Dendritic Drainage Plain
Codes:
(A) P-2, Q-1, R-4, S-3
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-3, R-2, S-1
(D) P-2, Q-3, R-1, S-4

34. All of the following are characteristics of the Godavari delta EXCEPT:
(A) It is formed by the deposition of fertile alluvium.
(B) It is highly suitable for paddy cultivation.
(C) It advances progressively into the Bay of Bengal.
(D) It is dominated by floating islands called phumdis.

35. Consider the following statements regarding the Indus River system:
I. The Beas river flows entirely within India.
II. The Jhelum river flows through the Wular Lake.
III. The Chenab is the largest tributary of the Indus.
IV. The Sutlej originates south of the Vindhyas.
Which of the above statement(s) is/are incorrect?
(A) Only IV
(B) I and II
(C) III and IV
(D) II and IV

36. Consider the following statements regarding the Krishna River basin:
I. It is the second largest east-flowing peninsular river.
II. The Koyna dam is built on one of its major tributaries.
III. The Tungabhadra is its largest tributary.
IV. It forms a common delta with the Godavari river.
V. It flows through a rift valley.
Which of the above statement(s) is/are correct?
(A) I, II, III, and IV
(B) I, II, IV, and V
(C) II, III, IV, and V
(D) I, III, IV, and V

37. Identify the correct statement highlighting a key difference between Himalayan and Peninsular rivers.
(A) Himalayan rivers are mostly perennial, whereas Peninsular rivers are largely seasonal
(B) Peninsular rivers generally have larger basins than Himalayan rivers
(C) Peninsular rivers are antecedent, whereas Himalayan rivers are consequent
(D) Himalayan rivers flow through mature valleys, whereas Peninsular rivers flow through V-shaped valleys

38. The Yamuna River originates from the Yamunotri glacier located on the southwestern slopes of which peak?
(A) Nanda Devi
(B) Kamet
(C) Trisul
(D) Banderpunch

39. The Godavari River originates from which of the following locations?
(A) Mahabaleshwar

NODIA

(B) Brahmagiri Hills
(C) Amarkantak
(D) Trimbakeshwar

40. The Indus River originates near which prominent lake in Tibet?
(A) Pangong Tso
(B) Rakshastal
(C) Tsomgo Lake
(D) Mansarovar Lake

41. The Kaveri River originates in the Brahmagiri range of which mountain system?
(A) Eastern Ghats
(B) Western Ghats
(C) Nilgiri Hills
(D) Cardamom Hills

42. The River Ganga originates from the Gangotri glacier under which specific name?
(A) Mandakini
(B) Alaknanda
(C) Bhagirathi
(D) Dhauliganga

43. Severe pollution in the Yamuna River during the dry season is most directly an effect of:
(A) High glacial melt adding heavy metals to the river channel.
(B) Excessive water withdrawal and untreated sewage discharge.
(C) Increased tectonic activity in the river bed causing silt.
(D) Flooding caused by the Chambal tributary in the dry season.

44. With reference to the Brahmaputra River, which of the following statements is an exception to its general characteristics?
(A) It carries a smaller volume of water in Tibet compared to India.
(B) It enters India through a deep gorge after taking a U-turn at Namcha Barwa.
(C) It is known as the Tsangpo in Tibet.
(D) It flows parallel to the Himalayas in a westerly direction in Tibet.

45. Which of the following is a negative statement (incorrectly attributed) regarding the Krishna River?
(A) Its major tributaries include the Tungabhadra and Musi.
(B) The Nagarjuna Sagar Dam is built across it.
(C) It empties into the Arabian Sea.
(D) Its basin extends over Maharashtra, Karnataka, and Andhra Pradesh.

46. Which of the following pairs of river characteristics is incorrectly matched?
(A) Himalayan Rivers - High silt load from mountain erosion.
(B) Peninsular Rivers - High instances of shifting courses.
(C) Peninsular Rivers - Broad and shallow valleys in the plateau.
(D) Himalayan Rivers - Meandering courses within the plains regions.

47. Identify the correct statement regarding the Godavari River.
(A) It is the longest river found within the Indian subcontinent.
(B) It flows through Maharashtra, Telangana, and Andhra Pradesh.
(C) It creates a large estuary along the western coastal margin.
(D) Its basin is shared exclusively by Maharashtra and Andhra Pradesh.

48. Which of the following correctly pairs a Himalayan tributary of the Ganga with its origin?
(A) Kosi - Amarkantak Plateau
(B) Gandak - Nepal Himalayas
(C) Ghaghra - Vindhya Range
(D) Gomti - Tibetan Plateau

49. Which of the following is the correct sequence of the Himalayan tributaries of the Ganga from West to East?
(A) Yamuna, Ghaghra, Gandak, Kosi
(B) Ghaghra, Yamuna, Kosi, Gandak
(C) Yamuna, Gandak, Ghaghra, Kosi
(D) Gandak, Yamuna, Ghaghra, Kosi

50. Consider the following statements regarding the Brahmaputra basin:
Statement I: The Brahmaputra is highly prone to massive floods and channel shifting during monsoons.
Statement II: The river receives heavy rainfall in its catchment area and flows over a relatively

Downloaded from www.pdf.tube

flat gradient in Assam.
Which of the following is correct?
(A) Both Statement I and II are true and II explains I.
(B) Both Statement I and II are true but II does not explain I.
(C) Statement I is true, Statement II is false.
(D) Statement I is false, Statement II is true.

51. The Krishna Water Disputes Tribunal primarily involves conflicts among which of the following states?
(A) Kerala, Karnataka, and Tamil Nadu
(B) Gujarat, Madhya Pradesh, and Maharashtra
(C) Odisha, Andhra Pradesh, and Chhattisgarh
(D) Maharashtra, Karnataka, and Andhra Pradesh

52. Identify the correct confluence point where the Bhagirathi and Alaknanda rivers meet to form the Ganga.
(A) Rudraprayag
(B) Karnaprayag
(C) Vishnuprayag
(D) Devprayag

53. Find the odd one out among the following tributaries of the Indus based on their origin location.
(A) Jhelum
(B) Chenab
(C) Sutlej
(D) Ravi

54. Which of the following correctly pairs a tributary with the Godavari river?
(A) Bhima
(B) Tungabhadra
(C) Pranhita
(D) Ghataprabha

55. Identify the incorrect statement regarding the tributaries of the Yamuna River.
(A) The Son river joins the Yamuna before its confluence with the Ganga.
(B) The Chambal rises in the Malwa plateau and joins the Yamuna.
(C) The Betwa and Ken rivers join the Yamuna from its right bank.
(D) The Tons river is the largest tributary of the Yamuna in its mountainous stretch.

56. What is the geological consequence of the young and youthful nature of Himalayan rivers?
(A) Formation of deep gorges and V-shaped valleys
(B) Creation of vast interior rift valleys
(C) Reduced capacity for carrying alluvium
(D) Direct deposition of sediments at the river source

57. The Krishna River originates near which hill station in Maharashtra?
(A) Mahabaleshwar
(B) Lonavala
(C) Matheran
(D) Panchgani

58. Which of the following statements regarding the course of the Indus River is incorrect?
(A) It enters the plains in India at Haridwar.
(B) It flows in a north-west direction between the Ladakh and Zaskar ranges.
(C) It forms a spectacular gorge near Nanga Parbat.
(D) It ultimately drains into the Arabian Sea.

59. The shifting course of the Kosi River is a concept application of which geomorphological phenomenon?
(A) Vertical isostatic adjustment of the crustal block.
(B) Glacial plucking during the intensive Pleistocene epoch.
(C) Excessive alluviation and high sediment discharge.
(D) Wind deflation in the surrounding arid desert environments.

60. The Brahmaputra creates a braided channel in Assam primarily due to:
(A) High tectonic stability of the region
(B) Heavy rainfall and excessive sediment load
(C) Passage through arid desert environments
(D) Deep limestone bedrock that absorbs water

NODIA

61. The formation of the Narmada valley is best described conceptually as:
(A) An antecedent gorge cut by glacial meltwater
(B) A mature meandering floodplain
(C) A structural fault known as a rift valley
(D) An intermontane sedimentary basin

62. Which of the following is the best answer describing the primary objective of watershed management?
(A) To conserve soil and water resources in a drainage basin.
(B) To redirect all river flows into a single national water grid.
(C) To clear forests along riverbanks to prevent downstream floods.
(D) To build maximum possible large dams on every minor tributary.

63. The Mahanadi River rises in the highlands of which state?
(A) Chhattisgarh
(B) Odisha
(C) Jharkhand
(D) Madhya Pradesh

64. A lake formed by the depression of the earth's crust due to faulting or folding is defined as a:
(A) Volcanic lake
(B) Glacial lake
(C) Tectonic lake
(D) Aeolian lake

65. Find the odd one out based on the flow direction and outfall of the following rivers.
(A) Godavari
(B) Narmada
(C) Tapti
(D) Mahi

66. Wular Lake, one of the largest freshwater lakes in Asia, was primarily formed by:
(A) Tectonic activity
(B) Meteorite impact
(C) Volcanic eruption
(D) Wind deflation

67. The dispute over the sharing of the Kaveri river waters is a direct cause of historical agreements and geographical flow primarily between which two states?
(A) Kerala and Maharashtra
(B) Andhra Pradesh and Telangana
(C) Karnataka and Tamil Nadu
(D) Karnataka and Andhra Pradesh

68. All of the following are exceptions to the typical characteristics of peninsular rivers observed in Kerala's rivers, EXCEPT:
(A) Exceptionally short river courses found in the region.
(B) High sediment deposition at the mouth forming deltas.
(C) Swift currents due to steep mountain gradients locally.
(D) Formation of backwaters or kayals at the river estuary.

69. Consider the following statements regarding the controversies surrounding the interlinking of rivers project:
I. It promises an end to both floods and droughts without any ecological cost.
II. It may lead to massive deforestation and submergence of fertile lands.
III. It involves significant interstate water sharing conflicts.
Which of the above statement(s) is/are incorrect?
(A) I only
(B) II only
(C) III only
(D) II and III

70. Identify the incorrect statement regarding the Narmada River.
(A) It forms the picturesque Dhuandhar waterfalls near Jabalpur.
(B) It lacks a well-developed tributary system, with most joining at right angles.
(C) It forms a vast delta before draining into the Gulf of Khambhat.
(D) It acts as a traditional boundary between North and South India.

71. Match List I with List II and select the correct answer using the codes given below:
List I: (Lake)
P. Chilika
Q. Loktak
R. Vembanad
S. Sambhar
List II: (State)
1. Kerala
2. Rajasthan
3. Manipur
4. Odisha
Codes:

Click Here to Buy book on Amazon

(A) P-4, Q-3, R-1, S-2
(B) P-3, Q-4, R-2, S-1
(C) P-4, Q-1, R-3, S-2
(D) P-1, Q-2, R-4, S-3

72. Match List I with List II and select the correct answer using the codes given below:
List I: (Dam/Project)
P. Hirakud
Q. Sardar Sarovar
R. Nagarjuna Sagar
S. Mettur
List II: (River)
1. Kaveri
2. Mahanadi
3. Krishna
4. Narmada
Codes:
(A) P-2, Q-4, R-3, S-1
(B) P-4, Q-2, R-1, S-3
(C) P-2, Q-3, R-4, S-1
(D) P-1, Q-4, R-3, S-2

73. Which of the following pairs concerning the classification of river basins in India is incorrectly matched?
(A) Major river basins - Catchment area of more than 20,000 sq. km
(B) Medium river basins - Catchment area between 2,000 to 20,000 sq. km
(C) Minor river basins - Catchment area below 2,000 sq. km
(D) Micro river basins - Catchment area above 50,000 sq. km

74. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R):
Assertion (A): Both the Narmada and Tapti rivers lack extensive delta formations at their mouths.
Reason (R): They flow through hard rocky rift valleys and carry a relatively low load of sediments, emptying directly into the sea to form estuaries.
Select the correct answer from the codes below:
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

75. All of the following are features of Dal Lake in Jammu & Kashmir EXCEPT:
(A) It is integral to tourism and recreation in Srinagar.
(B) It features floating gardens known as "Rad".
(C) It is situated in a high-altitude valley environment.
(D) It is the largest saltwater lake in India.

76. Find the odd one out among the following tributaries of the Kaveri River.
(A) Kabini
(B) Bhavani
(C) Hemavati
(D) Indravati

77. Identify the correct statement regarding the formation of natural lakes in India.
(A) All natural lakes in India are of glacial origin.
(B) Peninsular India has a higher concentration of natural freshwater lakes than the Himalayan region.
(C) Ox-bow lakes are completely absent in the Gangetic plains.
(D) Tectonic activity is responsible for the formation of several deep lakes in the Himalayas.

78. Which of the following is the most appropriate reason for the westward flow of the Narmada River?
(A) The regional slope of the Peninsular plateau is towards the west.
(B) It was captured by a westward flowing stream during the Pleistocene.
(C) Heavy rainfall in the Eastern Ghats forces the water westwards.
(D) It flows through a fault line created by tectonic subsidence.

79. The primary objective of the 'Interlinking of Rivers' project in India is to:
(A) Facilitate inland navigation strictly for regional international trade.
(B) Transfer water from surplus to deficit basins for drought relief.
(C) Prevent international water disputes with all neighboring countries.

Downloaded from www.pdf.tube

(D) Convert saline lakes into freshwater bodies for agriculture and drinking.

80. Which is the longest river in the state of Kerala?
(A) Pamba
(B) Bharathappuzha
(C) Chaliyar
(D) Periyar

81. The regulatory effect of Wular Lake on the Jhelum river is a cause and effect relationship where:
(A) The lake's high salinity reduces the flow of the Jhelum.
(B) The river drains the lake completely during summer months.
(C) It absorbs excess floodwater, preventing sudden flooding.
(D) Heavy siltation from the lake entirely blocks the river.

82. The Narmada River originates from which prominent topographical feature in Madhya Pradesh?
(A) Amarkantak Plateau
(B) Pachmarhi Biosphere Reserve
(C) Bhander Range
(D) Mahadeo Hills

83. Identify the correct statement regarding the Tapti River.
(A) It is the longest river found within the Indian subcontinent.
(B) It originates in the Western Ghats and flows into the Bay of Bengal.
(C) It is an antecedent river that cuts through the Satpura range.
(D) It flows parallel to the Narmada River in a rift valley.

84. Consider the following statements regarding the National Perspective Plan (NPP):
Statement I: The NPP for water resources development is divided into the Himalayan Rivers Development and Peninsular Rivers Development components.
Statement II: The NPP focuses primarily on restricting groundwater extraction across urban centers.
Which of the following is correct?
(A) Statement I is true, Statement II is false
(B) Statement I is false, Statement II is true
(C) Both statements are true
(D) Both statements are false

85. The term 'watershed' in geographical context is best defined as:
(A) An underground aquifer storing large quantities of freshwater
(B) A highly elevated mountain peak covered with snow
(C) A dividing ridge between two drainage basins
(D) A man-made reservoir for irrigation

86. The Hirakud Dam, one of the longest earthen dams in the world, is built across which river?
(A) Godavari
(B) Mahanadi
(C) Krishna
(D) Narmada

NODIA

87. Find the odd one out among the following lakes based on their primary water characteristic (salinity vs freshwater).
(A) Wular Lake
(B) Sambhar Lake
(C) Dal Lake
(D) Loktak Lake

88. The Tapti River originates in the Betul district of which state?
(A) Maharashtra
(B) Madhya Pradesh
(C) Gujarat
(D) Chhattisgarh

89. The Ken-Betwa river interlinking project primarily aims to benefit which drought-prone region of Madhya Pradesh?
(A) Malwa
(B) Bundelkhand
(C) Nimar
(D) Baghelkhand

90. Which of the following correctly describes the west-flowing rivers of Kerala?
(A) They are short, swift, and originate in the Western Ghats.
(B) They are characterized by long courses and gentle gradients.
(C) They predominantly form large deltas along

the Malabar Coast.
(D) They flow exclusively through deep, structural rift valleys.

91. Sambhar Lake is geographically significant as India's:
(A) Deepest freshwater mountain lake.
(B) Largest inland saltwater lake.
(C) Highest altitude Himalayan lake.
(D) Longest coastal lagoon system.

92. High altitude lakes in the Himalayas, such as Pangong Tso, are most appropriately attributed to which formation process?
(A) Volcanic eruptions blocking high mountain passes in the area.
(B) Meteorite impacts occurring during the ancient Pleistocene.
(C) Glacial action including ice scouring and moraine damming.
(D) Wind erosion forming large deflation hollows in high plateaus.

93. Identify the correct statement regarding Chilika Lake.
(A) It is formed solely at the mouth of the Narmada river system.
(B) Its salinity levels remain constant throughout the calendar year.
(C) It is separated from the sea by a long, narrow sandy ridge.
(D) It was formed by a major volcanic crater explosion in the past.

94. All of the following are differences between East Coast deltas and West Coast estuaries EXCEPT:
(A) East Coast rivers carry higher sediment loads than others.
(B) West Coast rivers are shorter and swifter than eastern ones.
(C) Both coasts feature identical widespread mangrove formations.
(D) The Bay of Bengal is relatively shallow compared to the west.

95. Vembanad Lake is culturally renowned for hosting which famous annual event?
(A) Annual Pushkar Camel Fair.
(B) Nehru Trophy Boat Race.
(C) Nagaland Hornbill Festival.
(D) Periodic Kumbh Mela Event.

96. Identify the correct statement regarding the Western Ghats as a drainage divide.
(A) They divide the Ganga basin from the Brahmaputra river basin system.
(B) The primary divide between major rivers and short coastal streams.
(C) They prevent the westward flow of the Narmada and Tapti river lines.
(D) They allow all peninsular rivers to flow westwards to the open sea.

97. Chilika Lake, the largest coastal lagoon in India, is located in which state?
(A) West Bengal
(B) Andhra Pradesh
(C) Tamil Nadu
(D) Odisha

98. In geomorphological terms, an ox-bow lake is formed due to:
(A) A river cutting a meander neck during floods.
(B) Sudden tectonic depression of a river bed zone.
(C) Groundwater dissolving limestone bedrock sinkholes.
(D) A glacier leaving behind blocks of melting ice.

99. Consider the following high-altitude lakes:
I. Wular Lake
II. Vembanad Lake
III. Sambhar Lake
IV. Chilika Lake
Which of the following represents the correct sequence from North to South?
(A) Wular, Pangong Tso, Tsomgo, Gurudongmar
(B) Pangong Tso, Wular, Gurudongmar, Tsomgo
(C) Pangong Tso, Wular, Tsomgo, Gurudongmar
(D) Wular, Pangong Tso, Gurudongmar, Tsomgo

100. The high salinity of Sambhar Lake is an effect of which of the following causes?
(A) Direct intrusion of seawater from the distant Arabian Sea.
(B) Heavy precipitation leaching salts from the Himalayan range.
(C) Inland drainage in an arid region with high evaporation.
(D) Extensive industrial discharge from surrounding urban areas.

Click Here to Buy book on Amazon

101. Consider the following statements regarding inter-state river water disputes in India:
I. The Kaveri dispute primarily involves Karnataka, Tamil Nadu, Kerala, and Puducherry.
II. The Narmada Water Disputes Tribunal involved Gujarat, Madhya Pradesh, Maharashtra, and Rajasthan.
III. The Mahanadi water dispute is between Odisha and Jharkhand only.
IV. The Godavari dispute involved Maharashtra, Andhra Pradesh, Karnataka, Madhya Pradesh, and Odisha.
V. River water disputes are handled exclusively by the Supreme Court of India without tribunal intervention.
Which of the above statement(s) is/are incorrect?
(A) III and V
(B) I and II
(C) II, III, and V
(D) I, IV, and V

102. Which of the following best defines "Phumdis" found in Loktak Lake?
(A) Masses of vegetation, soil, and organic matter floating on the lake.
(B) Deep underwater tectonic vents located in the lake's benthic zone.
(C) Traditional boats used by local fishermen for daily transport activities.
(D) Seasonal migratory birds visiting the lake from the northern hemisphere.

103. Kanwar Lake in Bihar is a classic example of which type of lake?
(A) Glacial Lake
(B) Ox-bow Lake
(C) Crater Lake
(D) Lagoon

104. Crater lakes are factual formations best defined as:
(A) Lakes formed by the damming of a river by heavy landslides.
(B) Lakes created by the natural meandering of ancient rivers.
(C) Lakes formed by glacial melting in deep U-shaped valleys.
(D) Lakes in extinct volcano or meteorite impact depressions.

105. The Ambala ridge serves as a crucial drainage divide between which two major river systems?
(A) Ganga and Brahmaputra
(B) Narmada and Godavari
(C) Indus and Ganga
(D) Krishna and Kaveri

106. The ecological importance of Chilika Lake is conceptually demonstrated by its role as:
(A) The largest nesting ground for the Olive Ridley turtles.
(B) The largest wintering ground for migratory birds in India.
(C) The sole habitat of the Asiatic Lion in the subcontinent.
(D) A pure freshwater ecosystem supporting endemic mountain flora.

NODIA

107. Consider the following statements regarding the Ganga-Brahmaputra Delta:
Statement I: It is the largest and fastest-growing delta in the world.
Statement II: It is characterized by highly fertile soils and dense mangrove forests known as the Sundarbans.
Which of the following is correct?
(A) Both Statement I and II are true and II is the reason for I.
(B) Both Statement I and II are true but II is not the reason for I.
(C) Statement I is true, Statement II is false.
(D) Statement I is false, Statement II is true.

108. Consider the following lakes of India:
I. Wular Lake
II. Vembanad Lake
III. Sambhar Lake
IV. Chilika Lake
Which of the following represents the correct sequence from North to South?
(A) I, III, IV, II
(B) I, IV, III, II
(C) III, I, IV, II
(D) I, III, II, IV

109. Identify the correct statement regarding Pangong Tso.
(A) It is located entirely within the territory of Ladakh.
(B) It drains directly into the Indus river system basin.

(C) It remains completely unfrozen throughout the winter.
(D) It is a saltwater lake at over 4,000 meters elevation.

110. Consider the following statements regarding volcanic and crater lakes in India:
I. Lonar lake is located in the Buldhana district of Maharashtra.
II. The water of Lonar lake is both saline and alkaline in nature.
III. India has numerous active volcanic crater lakes spread across the Aravallis.
IV. The basaltic rock of the Deccan Plateau hosts the Lonar crater.
Which of the above statement(s) is/are correct?
(A) II, III, and IV
(B) I, III, and IV
(C) I, II, and IV
(D) I, II, and III

111. Under which Article of the Indian Constitution is the Parliament empowered to adjudicate inter-state river water disputes?
(A) Article 280
(B) Article 245
(C) Article 256
(D) Article 262

112. Which of the following is correctly paired regarding Loktak Lake's ecological uniqueness?
(A) Keibul Lamjao - India's only active volcanic landform.
(B) Phumdis - Habitat of the Sangai (brow-antlered deer).
(C) Salinity - Highest inland salt producer in the region.
(D) Origin - Meteorite impact crater created in ancient times.

113. Which term best defines the brackish water lagoons and lakes running parallel to the Malabar coast?
(A) Phumdis
(B) Chos
(C) Kayals
(D) Bhangar

114. A river delta is factual evidence of which geographical process?
(A) Extreme vertical erosion by a river entering the sea at high speed.
(B) Sediment deposition by a river entering a standing body of water.
(C) Tectonic subsidence of a coastal region due to tectonic movements.
(D) The collision of fresh river water with heavy ocean tides offshore.

115. Identify the incorrect statement regarding the formation of ox-bow lakes in the Ganga plains.
(A) They commonly form in the middle and lower river courses.
(B) They are isolated from the main river channel system.
(C) Over time, they fill with sediment and become swamps.
(D) They form in regions with steep and swift river flows.

116. Loktak Lake is situated in which northeastern state of India?
(A) Assam
(B) Meghalaya
(C) Mizoram
(D) Manipur

117. A drainage divide or watershed boundary is best defined as:
(A) The point where a river bifurcates into distributaries.
(B) The deepest part of a primary river channel system.
(C) A man-made canal linking two separate river systems.
(D) An elevated land area that separates two adjacent basins.

118. Vembanad Lake, known for its extensive backwaters, is located in which state?
(A) Karnataka
(B) Goa
(C) Tamil Nadu
(D) Kerala

119. Which of the following high-altitude lakes is correctly paired with its state/union territory?
(A) Tsomgo Lake - Sikkim
(B) Gurudongmar Lake - Ladakh
(C) Pangong Tso - Himachal Pradesh
(D) Roopkund - Arunachal Pradesh

Downloaded from www.pdf.tube

120. Identify the correct statement regarding Lonar Lake.
(A) It is a meteorite impact crater lake in the Deccan Plateau.
(B) It is a freshwater lake located in the high Himalayan region.
(C) It is the largest artificial reservoir found in Madhya Pradesh.
(D) It was formed by the shifting course of the Godavari river.

121. The formation of estuaries rather than deltas by west-flowing peninsular rivers is heavily influenced by which cause and effect relationship?
(A) High tidal range and steep gradient causing sediment removal.
(B) Low volume of water causing the river to dry up before the sea.
(C) Extensive floodplains causing all sediment to be deposited inland.
(D) Presence of dense coastal forests trapping all suspended sediments.

122. The term 'base flow' in hydrology primarily refers to:
(A) The maximum flood level of a river during the monsoon season.
(B) The artificial release of water from a dam for irrigation use.
(C) The initial flow of water immediately following a rainstorm.
(D) Streamflow sustained by groundwater discharge into the river.

123. Identify the incorrect statement regarding the tribunal mechanism for water disputes.
(A) Tribunals are constituted by the Central Government under the Inter-State River Water Disputes Act, 1956.
(B) The decision of a tribunal is final and binding on the parties.
(C) States cannot appeal tribunal decisions to the Supreme Court under any jurisdiction.
(D) Tribunals often take years to finalize their awards due to complex hydrological data.

124. Identify the correct statement outlining the necessary conditions for delta formation.
(A) A fast-flowing river with minimal sediment load for deposition.
(B) A large, shallow coast and a river with high sediment load.
(C) Strong ocean currents and high tidal variations at the mouth.
(D) A shallow adjoining sea and active vertical erosion in the path.

125. Find the odd one out among the methods/ features related to natural surface water bodies and groundwater interaction.
(A) Percolation tanks
(B) Floodplain wetlands
(C) Deep borewell extraction
(D) Meander scars and ox-bow lakes

NODIA

126. The most appropriate explanation for the groundwater recharge role of rivers and lakes is:
(A) They allow surface water to percolate and replenish aquifers.
(B) They extract water from underground aquifers during dry seasons.
(C) They connect to the ocean, preventing groundwater salinization.
(D) They increase surface runoff, thereby reducing percolation rates.

127. Match List I with List II and select the correct answer using the codes given below:
List I: (River)
P. Ganga
Q. Narmada
R. Godavari
S. Tapti
List II: (Mouth Feature)
1. Estuary in Gulf of Khambhat
2. Arcuate Delta
3. Estuary near Surat
4. Large Lobate Delta
Codes:
(A) P-2, Q-1, R-4, S-3
(B) P-4, Q-3, R-2, S-1
(C) P-2, Q-3, R-4, S-1
(D) P-4, Q-1, R-2, S-3

128. An estuary is best defined factually as:
(A) A triangular tract of sediment deposited at the mouth of a river.
(B) A deep mountain gorge carved by an antecedent river in the past.
(C) An inland salt lake with no outlet to the open sea environment.

(D) A coastal body where freshwater from rivers mixes with saltwater.

129. The Narmada estuary is ecologically and economically significant primarily because:
(A) It facilitates deep-water inland navigation and supports rich fisheries.
(B) It forms the largest mangrove forest in Western India.
(C) It provides the exclusive habitat for the Irrawaddy dolphin.
(D) It completely prevents the intrusion of saline water into agricultural lands.

130. The ecological restoration of urban lakes is vital for groundwater recharge primarily because:
(A) Concrete lake beds increase the percolation of surface water.
(B) It increases water retention time and infiltration capacity.
(C) Introducing exotic fish species speeds up the local water cycle.
(D) Building tall retaining walls traps rainfall water indefinitely.

www.nodia.in

Click Here to Buy book on Amazon

ANSWERS

1. (D) Basalt
The Deccan Trap region in India was primarily formed by massive volcanic fissure eruptions during the late Cretaceous period. These eruptions released layers of basaltic lava that solidified over millions of years, creating a thick sequence of igneous rocks. This extensive basaltic plateau is characterized by its distinct step-like topography and eventually weathers into fertile black cotton soil.

2. (C) Meghalaya Plateau
The Garo, Khasi, and Jaintia hills are major sub-divisions of the Meghalaya Plateau, also known as the Shillong Plateau. Geologically, this region is an eastern extension of the Peninsular Plateau and is separated from it by the Malda Fault. These hills are famous for receiving extremely high rainfall and hosting diverse tribal cultures within their rugged terrain.

3. (C) It is characterized by severe erosion from rivers and wind.
A dissected plateau is a plateau area that has been severely eroded by the action of rivers, wind, or ice. Over time, these continuous erosive forces cut deep valleys and ridges into the original level surface. This process creates a rugged and irregular landscape, distinguishing it from younger, flat-topped plateaus or those formed by relatively recent tectonic uplift.

4. (C) Godavari
The Telangana Plateau is primarily drained by the Godavari River and its various tributaries. This river system plays a vital role in providing water for agriculture and irrigation across the semi-arid region. The plateau slopes gently towards the east, allowing major rivers to flow through the terrain before emptying into the Bay of Bengal, supporting the local regional economy.

5. (A) Both A and R are true and R is the correct explanation of A.
The Malwa Plateau is well known for its extensive network of ravines, particularly in the northern section. This deep dissection is caused by the intensive gully erosion from the Chambal river system. The soft alluvial soil combined with high-velocity runoff during monsoons leads to the formation of badlands, which are unsuitable for agriculture and represent a classic geomorphic feature.

6. (B) Dendritic
A dendritic drainage pattern is characterized by a network that resembles the branching of a tree. This pattern typically develops in regions where the underlying rock structure is uniform and resistant to erosion in all directions. It is commonly found in flat terrains or areas with horizontal sedimentary rocks, where rivers follow the regional slope of the land surface.

7. (B) A plateau completely or partially enclosed by mountain ranges
Intermontane plateaus are high-altitude landforms that are completely or partially surrounded by mountain ranges. These plateaus are formed as a result of tectonic activity, often during the same period as the surrounding mountains. The Tibetan Plateau is a classic global example, sitting between the Himalayas and other major ranges, characterized by its extreme elevation and enclosed geographic position.

8. (B) Damodar
The Damodar River flows through a rift valley in the Chota Nagpur Plateau, effectively dividing the region into two distinct parts. To the north lies the Hazaribagh plateau, while the Ranchi plateau is situated to the south. This river is geologically significant for its coal-bearing Gondwana rock formations, which are essential for the mineral wealth of eastern India.

9. (B) Karnataka Plateau
The Baba Budan Hills are a prominent mountain range located within the Karnataka Plateau. This region is historically famous for the introduction of coffee to India and currently serves as a major hub for iron ore mining. The hills are part of the Western Ghats and contribute to the rugged, hilly

NODIA

topography characteristic of the Malnad region of the plateau.

10. (C) Aravalli Range
The Deccan Plateau is bounded by the Western Ghats to the west, the Eastern Ghats to the east, and the Satpura and Vindhya ranges to the north. In contrast, the Aravalli Range is located further north and west, primarily in Rajasthan. It forms the boundary of the Central Highlands rather than being a direct part or boundary of the Deccan.

11. (D) A river that maintains its course despite tectonic uplift.
Antecedent drainage refers to a river system that existed before the uplift of a mountain range. As the land rose due to tectonic activity, the river maintained its original course by cutting through the rising rock at the same rate. This process results in the formation of deep, narrow gorges, as seen in the Indus, Sutlej, and Brahmaputra rivers.

12. (A) P-4, Q-3, R-1, S-2
Geological classification of plateaus depends on their formation and location. The Deccan Plateau is a lava plateau formed by volcanic activity. The Scottish Highlands represent a dissected plateau shaped by erosion. The Tibetan Plateau is an intermontane plateau surrounded by mountains. The Patagonian Plateau is a piedmont plateau located at the foot of mountains, demonstrating the diversity of these landforms globally.

13. (A) I and II only
The Meghalaya Plateau is geologically an eastern extension of the Peninsular Plateau, sharing similar ancient rock structures. It is separated from the main peninsular block by the Malda Fault or Gap, which was filled with Ganga-Brahmaputra sediments. Unlike the Himalayas, it was not formed by recent tectonic uplift but is part of the much older and stable Indian Shield region.

14. (C) Mahanadi
The Malwa Plateau is primarily drained by the Chambal, Betwa, and Ken rivers, which flow northwards towards the Yamuna. The Mahi river also flows through its western section towards the Gulf of Khambhat. In contrast, the Mahanadi River originates in the highlands of Chhattisgarh and flows eastwards through Odisha, having no geographical connection to the drainage system of the Malwa.

15. (D) Radial
A radial drainage pattern occurs when rivers originate from a single central high point and flow outwards in different directions. This pattern is often observed on isolated volcanic cones or dome-shaped mountains. A prominent example in India is the Amarkantak Plateau, where rivers like the Narmada and Son flow in various directions from a common upland area, creating a circular network.

NODIA

16. (A) Lava Plateau
The Deccan Plateau is classified as a lava plateau because it was formed by successive layers of basaltic lava. During the Cretaceous period, fissure eruptions spread molten rock over a vast area of southern India. These layers cooled and solidified, creating a thick sequence of igneous rocks that characterize the plateau's geology and contribute to the formation of black soil.

17. (A) It has a semi-arid climate with Dharwar and Cuddapah rocks.
The Telangana Plateau is characterized by a semi-arid climate and geologically consists of ancient Dharwar and Cuddapah rock systems. It is primarily drained by the Godavari and Krishna rivers. The region features rolling hills and plains rather than dense evergreen forests or recent alluvial deltas. Its landscape is shaped by long periods of weathering and erosion on the stable peninsular block.

18. (A) Successive fissure eruptions of basic lava during the Cretaceous.
The characteristic step-like topography of the Deccan Trap, often called ghats, resulted from multiple fissure eruptions of basic lava during the Cretaceous period. As successive layers of basaltic lava flowed out and solidified, they created flat-topped hills with steep sides. Over time, weathering and erosion emphasized these horizontal layers, giving the landscape its distinct staircase appearance across the western peninsular region.

19. (D) Malda Gap
The Malda Gap is a tectonic depression that separates the Meghalaya Plateau from the main peninsular block, including the Chota Nagpur Plateau. This gap was created by faulting and was subsequently filled with alluvium deposited by the Ganga and Brahmaputra river systems. It highlights the geological continuity between the northeast hills and the ancient Indian shield, despite the current physical separation.

20. (A) Coal and Iron Ore
The Chota Nagpur Plateau is often referred to as the Ruhr of India due to its immense mineral wealth. It possesses some of the country's largest reserves of coal and iron ore, particularly within the Gondwana rock formations. Additionally, the region is rich in manganese, mica, and bauxite, making it a critical hub for India's heavy industries and metallurgical sectors.

21. (C) Radial
The Amarkantak Plateau serves as a classic example of a radial drainage pattern. From this central highland area, several major rivers originate and flow in different directions. The Narmada flows westward towards the Arabian Sea, while the Son river flows northwards to join the Ganga. This outward movement from a single upland area is the defining characteristic of radial drainage systems.

22. (B) Black Cotton Soil
The weathering of the basaltic lava rocks of the Deccan Trap has led to the formation of black cotton soil, also known as regur. This soil is highly fertile and is characterized by its high clay content and excellent moisture-retention capacity. It is particularly suitable for growing cotton, as well as other crops like sugarcane, wheat, and oilseeds across Maharashtra and Gujarat.

23. (D) Dendritic
The northern part of the Malwa Plateau exhibits a dendritic drainage pattern. This is due to the uniform rock structure and the general northward slope of the terrain towards the Gangetic plains. Rivers like the Chambal and its tributaries branch out in a manner similar to tree limbs as they erode the plateau surface, eventually creating the famous ravine landscapes of the region.

24. (D) Tungabhadra River
The Tungabhadra River, a major tributary of the Krishna, serves as a significant geographical boundary between the Karnataka Plateau and the Telangana Plateau. It flows through the central part of the peninsular region, providing essential water resources for agriculture and power generation. The river has historically been a frontier between various southern Indian kingdoms and continues to be a vital hydrological feature.

25. (A) It consists predominantly of Gondwana rocks.
While the Chota Nagpur Plateau contains significant Gondwana rock formations that host coal reserves, it is predominantly composed of much older Archean granites and gneisses. These ancient rocks form the base of the plateau. The region is indeed characterized by high tribal populations and Parasnath as its highest peak, but classifying the entire plateau as predominantly Gondwana is geologically inaccurate.

26. (D) It is bounded by the Satpura and Vindhya ranges to the north
The Deccan Plateau is a large triangular landmass bounded by the Satpura and Vindhya ranges to the north, the Western Ghats to the west, and the Eastern Ghats to the east. Its general slope is from west to east, which is why most major rivers flow towards the Bay of Bengal. It consists primarily of igneous basaltic rocks rather than sedimentary formations.

27. (A) I, IV, III, II
Geographically, the Malwa Plateau is located in central India, making it the northernmost of the group. To its southeast lies the Chota Nagpur Plateau in eastern India. Moving further south, the Telangana Plateau occupies the central part of the peninsula, followed by the Karnataka Plateau in the southwest. This sequence follows the latitudinal progression from the central highlands to the southern peninsula.

28. (A) Aravalli and Vindhya
The Malwa Plateau is situated in central India, positioned between the Aravalli Range to the northwest and the Vindhya Range to the south. This location makes it a transitional zone between the northern plains and the peninsular

Downloaded from www.pdf.tube

STUDYING FROM PDFs?

THINK AGAIN.

If you are studying only from PDFs,
you are wasting valuable time.

Research shows that learning from

PRINTED BOOKS has up to

4× HIGHER RETENTION

than studying from screens.

PRINT BOOK = BETTER MEMORY

PDF = LOWER RETENTION

Those who study from **PRINTED BOOKS**
move **AHEAD.**

Others are left **BEHIND**
in competition.

In competitive exams,
being average is not enough.

STAY ONE STEP AHEAD.

plateau. The plateau slopes toward the north and is characterized by a dissected landscape with several rivers flowing through it towards the Yamuna and Ganga systems.

29. (A) Statement I is true, Statement II is false
The Karnataka Plateau is divided into two distinct regions: Malnad and Maidan. Malnad is the hilly, highly dissected western section adjacent to the Western Ghats, featuring dense forests and deep valleys. In contrast, Maidan is the eastern part consisting of undulating, rolling plains. The second statement incorrectly swaps the characteristics of these two geographical sub-divisions, making it factually wrong.

30. (D) It slopes from south to north
The slope of the Malwa Plateau is primarily from south to north. This is clearly evidenced by the direction of its major drainage systems, such as the Chambal, Betwa, and Ken rivers. These rivers originate in the Vindhya Range in the south and flow northwards to join the Yamuna River. This regional tilt determines the hydrological and erosional patterns across the plateau.

31. (C) Formation of the Sundarbans delta.
The Ganga river carries immense quantities of silt from the Himalayas to its lower reaches in West Bengal and Bangladesh. As the river slows down near the sea, it deposits this sediment, leading to the formation of the Sundarbans. This is the world's largest delta and is characterized by its complex network of distributaries, tidal creeks, and extensive mangrove forests.

32. (B) A destructive antecedent river known as the "Sorrow of Bihar".
The Kosi River is known as the Sorrow of Bihar due to its frequent and devastating floods. It is an antecedent river that carries an exceptionally high load of sediment from the Himalayas. This siltation causes the river to frequently shift its course, often by several kilometers, destroying agricultural land and settlements. It is one of the most unpredictable rivers in India.

33. (A) P-2, Q-1, R-4, S-3
Indian rivers possess distinct geological and hydrological traits. The Indus is an antecedent river that existed before the Himalayas. The Narmada is unique for flowing through a rift valley. The Ganga creates a massive dendritic drainage pattern across the northern plains. The Godavari is the largest peninsular river basin in India. These features define the diverse drainage systems found throughout the Indian subcontinent.

34. (D) It is dominated by floating islands called phumdis.
The Godavari delta is formed by the deposition of fertile alluvium, making it highly productive for agriculture, especially paddy cultivation. It continues to expand into the Bay of Bengal as the river deposits sediment at its mouth. However, floating islands called phumdis are a unique feature of Loktak Lake in Manipur and are not found in the deltaic regions of peninsular rivers.

35. (A) Only IV
Most statements about the Indus system are correct: the Beas flows entirely within India, the Jhelum passes through Wular Lake, and the Chenab is its largest tributary. However, the statement about the Sutlej is incorrect. The Sutlej River originates in the Tibetan Plateau near Lake Rakshastal, which is far north of the Vindhya Range, and cuts through the Himalayan mountains.

36. (A) I, II, III, and IV
The Krishna River is the second largest east-flowing peninsular river and has a major dam, the Koyna, on one of its tributaries. The Tungabhadra is indeed its largest tributary, and the river forms a common deltaic plain with the Godavari on the east coast. Crucially, the Krishna does not flow through a rift valley, which distinguishes it from the Narmada.

37. (A) Himalayan rivers are mostly perennial, whereas Peninsular rivers are largely seasonal
A fundamental difference between the two systems is their water source. Himalayan rivers are perennial because they are fed by both melting glaciers and monsoon rainfall. In contrast, Peninsular rivers are largely seasonal and depend almost entirely on rainfall during the monsoon season. This results in significant fluctuations in water levels for peninsular rivers compared to the more consistent Himalayan streams.

NODIA

38. (D) Banderpunch
The Yamuna River, the largest tributary of the Ganga, originates from the Yamunotri glacier. This glacier is situated on the southwestern slopes of the Banderpunch peak in the Mussoorie range of the Lower Himalayas. From its source, the river flows through a series of valleys and gorges before entering the plains at Tajewala, eventually meeting the Ganga at Prayagraj.

39. (D) Trimbakeshwar
The Godavari River, often called the Dakshin Ganga, originates in the Western Ghats at Trimbakeshwar, located in the Nashik district of Maharashtra. This location is a prominent pilgrimage site. From its source, the river flows eastward across the Deccan Plateau, draining a vast basin before reaching the Bay of Bengal. It is the longest river in Peninsular India and geologically old.

40. (D) Mansarovar Lake
The Indus River originates in the Tibetan Plateau in the vicinity of Lake Mansarovar. Specifically, it rises from the Sengge Zangbo glacier. From Tibet, it flows northwest into India through Ladakh, passing between the Ladakh and Zaskar ranges. It is one of the longest rivers in Asia and was the cradle of the ancient Indus Valley Civilization, serving as a vital water source.

41. (B) Western Ghats
The Kaveri River originates in the Brahmagiri range of the Western Ghats, specifically at Talakaveri in the Kodagu district of Karnataka. It is one of the major east-flowing rivers of the peninsula. Unlike many other southern rivers, the Kaveri maintains a relatively consistent flow throughout the year because its catchment receives rainfall from both the southwest and northeast monsoons.

42. (C) Bhagirathi
The River Ganga begins its journey at the snout of the Gangotri glacier, known as Gaumukh, in the Uttarakhand Himalayas. At its point of origin, the river is known as the Bhagirathi. It flows through the mountains until it reaches Devprayag, where it joins the Alaknanda River. After this confluence, the combined stream is officially called the Ganga as it enters the plains.

43. (B) Excessive water withdrawal and untreated sewage discharge.
Severe pollution in the Yamuna River during the dry season is primarily caused by the combination of excessive water withdrawal for irrigation and domestic use, and the discharge of untreated industrial and domestic sewage. With very little natural freshwater left to dilute the pollutants, the river often resembles an open drain in urban stretches like Delhi, leading to critical ecological degradation.

44. (D) It flows parallel to the Himalayas in a westerly direction in Tibet.
In the Tibetan Plateau, the Brahmaputra, known as the Tsangpo, flows parallel to the Himalayas in an easterly direction, not westerly. It carries a smaller volume of water in Tibet due to the cold and dry climate. After reaching Namcha Barwa, it takes a sharp U-turn and enters India through a deep gorge in Arunachal Pradesh, where its volume increases.

45. (C) It empties into the Arabian Sea.
The Krishna River is an east-flowing river that originates in the Western Ghats at Mahabaleshwar. Its major tributaries include the Tungabhadra, Bhima, and Musi, and its basin covers parts of Maharashtra, Karnataka, and Andhra Pradesh. The Nagarjuna Sagar Dam is a major project on this river. However, it empties into the Bay of Bengal, not the Arabian Sea.

46. (B) Peninsular Rivers - High instances of shifting courses.
Himalayan rivers are characterized by high silt loads and frequently shifting courses, like the Kosi, due to their youthful nature and high energy. In contrast, peninsular rivers flow through stable, mature valleys on a hard rocky bed. They generally follow fixed courses and do not exhibit the same level of wandering or meandering as the rivers in the northern alluvial plains.

47. (B) It flows through Maharashtra, Telangana, and Andhra Pradesh.
The Godavari River is the longest peninsular river and flows through several states, including Maharashtra, Telangana, and Andhra Pradesh, before emptying into the Bay of Bengal. Its basin is shared by even more states, including Chhattisgarh, Odisha, and Karnataka. It forms a

Click Here to Buy book on Amazon

large delta on the east coast, not an estuary on the west, and is the second-longest river in India.

48. (B) Gandak - Nepal Himalayas
The Gandak River is a major tributary of the Ganga that originates in the Nepal Himalayas between the Dhaulagiri and Mount Everest ranges. In contrast, the Kosi originates in Tibet and Nepal, the Ghaghra rises in the Tibetan plateau near Mansarovar, and the Gomti is a plain-fed river originating in Uttar Pradesh. Correctly identifying river origins is essential for regional hydrology.

49. (A) Yamuna, Ghaghra, Gandak, Kosi
Moving from west to east across the northern plains of India, the major tributaries of the Ganga join in a specific order. The Yamuna is the westernmost major tributary, followed by the Ghaghra, then the Gandak, and finally the Kosi in the east. This sequence reflects the drainage pattern of the Himalayan rivers as they flow south and east to join the main channel.

50. (A) Both Statement I and II are true and II explains I.
The Brahmaputra River is highly prone to catastrophic floods and frequent channel shifting in its Assam stretch. This is primarily because the river receives enormous amounts of rainfall in its catchment area and carries an exceptionally high sediment load. When the river reaches the flat plains of Assam, its velocity decreases, causing sediment to deposit and the channel to overflow and shift.

51. (D) Maharashtra, Karnataka, and Andhra Pradesh
The Krishna Water Disputes Tribunal was established to resolve conflicts regarding the sharing of river waters among the riparian states of Maharashtra, Karnataka, and Andhra Pradesh. The dispute centers on the allocation of water for irrigation and power generation projects. Such conflicts are common in peninsular India where water resources are limited and highly dependent on seasonal monsoon rainfall.

52. (D) Devprayag
Devprayag is the sacred site where the Bhagirathi and Alaknanda rivers converge. This confluence marks the official beginning of the Ganga River. Located in the Tehri Garhwal district of Uttarakhand, it is one of the Panch Prayag or five holy confluences in the region. From this point forward, the river is known as the Ganga as it flows towards the Indo-Gangetic plains.

53. (C) Sutlej
Among the primary tributaries of the Indus, the Jhelum, Chenab, and Ravi originate within the Indian Himalayas or the Jammu and Kashmir region. In contrast, the Sutlej River originates outside of India in the Tibetan Plateau near Lake Rakshastal. This makes it a trans-Himalayan or antecedent river, distinguishing it from the other tributaries which have a more localized origin.

54. (C) Pranhita
The Pranhita is a major tributary of the Godavari River, formed by the confluence of the Wardha, Wainganga, and Penganga rivers. It drains a significant portion of the Vidarbha region. In contrast, the Bhima, Tungabhadra, and Ghataprabha are all prominent tributaries of the Krishna River system. Distinguishing between the sub-basins of these two large peninsular rivers is crucial for regional geography.

NODIA

55. (A) The Son river joins the Yamuna before its confluence with the Ganga.
Most statements regarding Yamuna's tributaries are correct: the Chambal rises in Malwa, and the Betwa and Ken join from the right bank. However, the Son river does not join the Yamuna; it is a major southern tributary that joins the Ganga directly near Patna. The Yamuna itself meets the Ganga at Prayagraj, and the Son confluence occurs further downstream.

56. (A) Formation of deep gorges and V-shaped valleys
Because Himalayan rivers are in their youthful stage and flow over steep gradients, they possess high erosive power. This results in the formation of deep gorges and V-shaped valleys as they cut through the rising mountain ranges. These landforms are factual evidence of active vertical erosion and the ongoing tectonic uplift of the Himalayas, contrasting with the broad valleys of older rivers.

57. (A) Mahabaleshwar
The Krishna River originates near the hill station of Mahabaleshwar in the Sahyadri range of the Western Ghats, Maharashtra. It is one of the most important rivers in southern India, flowing through Maharashtra, Karnataka, and Andhra Pradesh. The region around its source receives heavy rainfall, which feeds the river before it descends onto the Deccan Plateau and begins its long journey eastward.

58. (A) It enters the plains in India at Haridwar.
The Indus River flows northwest between the Ladakh and Zaskar ranges and forms a spectacular gorge near Nanga Parbat before turning south. However, the statement that it enters the plains at Haridwar is incorrect. Haridwar is the point where the Ganga River enters the Indo-Gangetic plains. The Indus enters the plains much further west, after passing through the mountain regions of Pakistan.

59. (C) Excessive alluviation and high sediment discharge.
The shifting course of the Kosi River is primarily due to excessive alluviation and high sediment discharge. As the river descends from the steep Himalayas into the flat plains of Bihar, it loses its velocity and deposits massive amounts of silt. This sediment blocks the existing channel, forcing the river to seek a new path, leading to frequent and unpredictable changes in its course.

60. (B) Heavy rainfall and excessive sediment load
The Brahmaputra River develops a braided channel in Assam primarily due to the combination of heavy monsoon rainfall and an exceptionally high sediment load. The river carries vast amounts of silt eroded from the Himalayas. In the flat Assam valley, the river's gradient decreases, causing it to deposit sediment and form numerous sandbars, which split the flow into multiple intertwined channels.

61. (C) A structural fault known as a rift valley
The Narmada valley is geologically classified as a rift valley or a structural fault. It was formed by the subsidence of a land block between two parallel faults during the period of Himalayan mountain building. This unique structural feature explains why the Narmada and Tapti rivers flow westward, contrary to the general eastward slope of the rest of the Peninsular Indian plateau region.

62. (A) To conserve soil and water resources in a drainage basin.
The primary objective of watershed management is to conserve and manage soil and water resources within a specific drainage basin. This involves implementing various techniques like rainwater harvesting, afforestation, and soil conservation to prevent erosion and recharge groundwater. Effective management ensures sustainable water availability for agriculture and domestic use while maintaining the ecological balance and reducing the risks of floods.

63. (A) Chhattisgarh
The Mahanadi River originates in the highlands of the Sihawa range in the Dhamtari district of Chhattisgarh. It is one of the major east-flowing peninsular rivers. From its source, it flows through Chhattisgarh and Odisha, draining a large basin that is vital for agriculture and industry in these states. The river eventually forms a large delta before emptying into the Bay of Bengal.

64. (C) Tectonic lake
A lake formed by the depression of the earth's crust due to tectonic processes such as faulting or folding is defined as a tectonic lake. These lakes are often deep and long-lived. Wular Lake in Jammu & Kashmir is a prime example in India, having been created by crustal movements. These formations are distinct from lakes created by volcanic activity, glaciers, or wind erosion.

65. (A) Godavari
Among the rivers listed, the Narmada, Tapti, and Mahi are all major west-flowing rivers that empty into the Arabian Sea through the Gulf of Khambhat. In contrast, the Godavari is an east-flowing river that originates in the Western Ghats and flows across the entire peninsula to empty into the Bay of Bengal. This makes it the odd one out based on direction.

66. (A) Tectonic activity
Wular Lake, located in the Bandipora district of Jammu & Kashmir, was primarily formed by tectonic activity. A depression in the earth's crust created by folding and faulting allowed the Jhelum river to fill the area, creating one of the

Downloaded from www.pdf.tube

largest freshwater lakes in Asia. It plays a critical role in the regional ecology and hydrology, acting as a natural flood control reservoir.

67. (C) Karnataka and Tamil Nadu
The Kaveri river water dispute is a long-standing conflict primarily between the states of Karnataka and Tamil Nadu, although Kerala and Puducherry are also involved. The core of the dispute lies in the sharing of water for irrigation, particularly during years of low rainfall. Historical agreements from the colonial era and the river's trans-boundary flow continue to be points of legal contention.

68. (B) High sediment deposition at the mouth forming deltas.
Rivers in Kerala exhibit unique characteristics compared to other peninsular rivers; they are exceptionally short, have swift currents due to steep gradients, and often form backwaters or kayals. However, they do not form large deltas at their mouths. Instead, because of their high velocity and the steep coastal topography, they empty directly into the sea or lagoons, often forming estuaries rather than deltas.

69. (A) I only
While the interlinking of rivers project promises to mitigate floods and droughts, it is incorrect to suggest it has no ecological costs. In fact, such massive engineering projects often lead to significant deforestation, loss of biodiversity, and the submergence of fertile lands and settlements. Furthermore, they frequently trigger complex interstate water sharing conflicts, making the project highly controversial among environmentalists and policymakers.

70. (C) It forms a vast delta before draining into the Gulf of Khambhat.
Most statements about the Narmada are correct: it forms the Dhuandhar falls, has few tributaries, and is a traditional boundary. However, the claim that it forms a vast delta is incorrect. Because it flows through a hard rocky rift valley and carries a low sediment load, the Narmada forms a broad estuary at its mouth in the Gulf of Khambhat rather than a delta.

71. (A) P-4, Q-3, R-1, S-2
India's diverse lakes are located across different states. Chilika Lake is a famous coastal lagoon in Odisha. Loktak Lake is unique for its floating islands in Manipur. Vembanad Lake is the longest lake in India, located in Kerala. Sambhar Lake is a major inland saltwater lake in Rajasthan. Understanding these locations is essential for studying regional geography and the varied environmental conditions found throughout India.

72. (A) P-2, Q-4, R-3, S-1
Major dams in India are built across significant rivers for various purposes. The Hirakud Dam is on the Mahanadi River. The Sardar Sarovar Dam is a major project on the Narmada. The Nagarjuna Sagar Dam is located on the Krishna River. The Mettur Dam is an important reservoir on the Kaveri River. These projects are vital for irrigation, hydroelectric power, and flood control across their respective regions.

NODIA

73. (D) Micro river basins - Catchment area above 50,000 sq. km
River basins in India are officially classified by their catchment area. Major basins have areas exceeding 20,000 sq. km. Medium basins range between 2,000 and 20,000 sq. km, and minor basins are those with areas below 2,000 sq. km. The term micro is not used for large areas; instead, basins with extremely large areas are simply categorized as part of the major river basin group.

74. (A) Both A and R are true and R is the correct explanation of A.
Both the Narmada and Tapti rivers do not form deltas at their mouths; instead, they create estuaries. This is because they flow through structural rift valleys composed of hard igneous rocks, which limits their ability to collect large amounts of sediment. Additionally, their swift flow and the high tidal range in the Arabian Sea facilitate the direct discharge of water into the ocean.

75. (D) It is the largest saltwater lake in India.
Dal Lake is a beautiful freshwater lake in Srinagar, Jammu & Kashmir, and is central to the region's tourism. It is famous for its houseboats and unique floating gardens known as Rad. However,

it is not a saltwater lake. Chilika Lake in Odisha holds the title for the largest brackish water lake, while Sambhar in Rajasthan is the largest inland saltwater lake in India.

76. (D) Indravati
The Kabini, Bhavani, and Hemavati are all significant tributaries of the Kaveri River, contributing to its flow through Karnataka and Tamil Nadu. In contrast, the Indravati River is a major tributary of the Godavari River. It flows primarily through the Bastar region of Chhattisgarh and Odisha before joining the Godavari, making it geologically and geographically distinct from the Kaveri river system.

77. (D) Tectonic activity is responsible for the formation of several deep lakes in the Himalayas.
Tectonic activity in the geologically young and active Himalayan region is responsible for the formation of several deep lakes, such as Wular Lake. While many mountain lakes are glacial, tectonic movements also create depressions. In contrast, peninsular India has fewer natural freshwater lakes, and ox-bow lakes are common in the middle and lower courses of the Gangetic plains due to meandering.

78. (D) It flows through a fault line created by tectonic subsidence.
The westward flow of the Narmada River is unique because it contradicts the general eastward slope of the Peninsular plateau. This occurs because the river flows through a rift valley, which is a structural fault line created by tectonic subsidence. The orientation of this fault directs the river towards the west, between the Vindhya and Satpura ranges, until it empties into the Arabian Sea.

79. (B) Transfer water from surplus to deficit basins for drought relief.
The primary objective of the Interlinking of Rivers project is to address the geographical imbalance of water availability in India. By transferring water from surplus basins, which often face flooding, to deficit basins prone to drought, the project aims to enhance national water security. This massive infrastructure plan seeks to expand irrigation and provide drinking water across various regions of the country.

80. (D) Periyar
The Periyar is the longest and largest river in the state of Kerala. It is often referred to as the Lifeline of Kerala because it provides water for drinking, irrigation, and the generation of a significant portion of the state's hydroelectricity. The river originates in the Western Ghats and flows through the Periyar National Park before reaching the Vembanad Lake and the Arabian Sea.

81. (C) It absorbs excess floodwater, preventing sudden flooding.
Wular Lake acts as a natural regulatory reservoir for the Jhelum River. During the monsoon or periods of snowmelt, the lake absorbs excess floodwater from the river, significantly reducing the risk of sudden downstream flooding in the Kashmir Valley. Conversely, during the dry season, the lake helps maintain a more steady flow in the Jhelum, demonstrating a vital hydrological cause-and-effect relationship.

82. (A) Amarkantak Plateau
The Narmada River originates from the Amarkantak Plateau, located in the Anuppur district of Madhya Pradesh. This plateau is a significant geographical meeting point of the Vindhya and Satpura ranges. From its source at Narmada Kund, the river flows westward through a rift valley for over 1,300 kilometers before emptying into the Gulf of Khambhat. It is considered a holy river.

83. (D) It flows parallel to the Narmada River in a rift valley.
The Tapti River flows parallel to the Narmada River in a structural rift valley south of the Satpura range. Like the Narmada, it is a major west-flowing river that empties into the Arabian Sea. It is not the longest river in the subcontinent, nor is it an antecedent river; rather, its course is determined by the tectonic faults of the peninsular block.

84. (A) Statement I is true, Statement II is false
The National Perspective Plan (NPP) is the blueprint for India's river interlinking project and is indeed divided into Himalayan and Peninsular components. However, the second statement is incorrect; the NPP focuses on surface water transfer and storage to manage surplus and

Click Here to Buy book on Amazon

deficit basins, rather than primarily restricting urban groundwater extraction. Its main goal is to optimize the use of water resources.

85. (C) A dividing ridge between two drainage basins
In geography, a watershed or drainage divide is an elevated line or ridge of land that separates two adjacent drainage basins. Rain falling on one side of the ridge flows into one river system, while rain on the other side flows into a different system. It defines the geographical boundary for water collection and is a fundamental unit for water resource management.

86. (B) Mahanadi
The Hirakud Dam is a massive multipurpose project built across the Mahanadi River in the state of Odisha. Completed in 1957, it is famous for being one of the longest earthen dams in the world. The reservoir created by the dam is used for irrigation, hydroelectric power generation, and flood control, significantly impacting the agricultural and industrial development of the Mahanadi delta region.

87. (B) Sambhar Lake
Among the lakes listed, Wular, Dal, and Loktak are all freshwater lakes. Wular and Dal are located in the high mountains of Jammu & Kashmir, while Loktak is in Manipur. Sambhar Lake, situated in Rajasthan, is the odd one out because it is a highly saline inland lake. It is India's largest source of salt and is located in an arid environment.

88. (B) Madhya Pradesh
The Tapti River originates in the Multai reserve forest in the Betul district of Madhya Pradesh. It is a major west-flowing river of central India. After leaving Madhya Pradesh, it flows through the Khandesh region of Maharashtra and eventually through Gujarat before emptying into the Gulf of Khambhat near Surat. Its journey is closely associated with the southern slopes of the Satpura range.

89. (B) Bundelkhand
The Ken-Betwa river interlinking project is designed to transfer surplus water from the Ken river to the Betwa river basin. Its primary objective is to provide irrigation and drinking water to the drought-prone Bundelkhand region, which spans parts of Madhya Pradesh and Uttar Pradesh. This project is significant as it is the first major river interlinking initiative implemented under the National Perspective Plan.

90. (A) They are short, swift, and originate in the Western Ghats.
The rivers of Kerala are characterized by being relatively short and swift-flowing. They originate in the high altitudes of the Western Ghats and flow westward towards the Arabian Sea. Due to the steep gradient of the terrain and the proximity of the mountains to the coast, these rivers have high energy and often form beautiful waterfalls and deep estuaries or lagoons.

91. (B) Largest inland saltwater lake.
Sambhar Lake is geographically significant as India's largest inland saltwater lake. Located in the arid landscape of Rajasthan, it is a key source of salt production for the country. The lake is an endorheic basin, meaning it has no outlet to the sea, which leads to high concentrations of minerals and salinity as water evaporates. It is also a designated Ramsar site.

92. (C) Glacial action including ice scouring and moraine damming.
High-altitude lakes in the Himalayas, such as Pangong Tso and Tsomgo, were primarily formed by glacial action. During the last ice age, advancing glaciers scoured deep depressions in the mountain valleys. When the glaciers retreated, these depressions were filled with meltwater. In other cases, glacial moraines—debris left behind by glaciers—acted as natural dams, trapping water to form these stunning high-mountain lakes.

93. (C) It is separated from the sea by a long, narrow sandy ridge.
Chilika Lake is a large coastal lagoon in Odisha, separated from the Bay of Bengal by a long, narrow sandy ridge or spit. This geographical feature allows the lake to maintain its unique brackish water environment, as it receives freshwater from rivers and saltwater from the sea. Its salinity varies significantly across seasons, being lowest during the monsoon when freshwater inflow is highest.

Downloaded from www.pdf.tube

94. (C) Both coasts feature identical widespread mangrove formations.
There are major differences between the coasts: East Coast rivers are longer and form deltas due to high sediment loads, while West Coast rivers are shorter and form estuaries. However, the statement that both coasts have identical widespread mangrove formations is incorrect. Mangroves are far more extensive and diverse in the large deltas of the East Coast, such as the Sundarbans, than the West.

95. (B) Nehru Trophy Boat Race.
Vembanad Lake in Kerala is famous for hosting the annual Nehru Trophy Boat Race, held at Punnamada Lake, which is a part of the larger Vembanad system. This spectacular event features long snake boats manned by dozens of rowers and attracts thousands of tourists. The race is a significant cultural event that highlights the traditional connection between the community and the backwater network.

96. (B) The primary divide between major rivers and short coastal streams.
The Western Ghats act as a primary drainage divide in peninsular India. They separate the large, long, east-flowing rivers like the Godavari, Krishna, and Kaveri, which drain into the Bay of Bengal, from the numerous short and swift west-flowing streams that empty into the Arabian Sea. This mountain range determines the hydrological character of the southern peninsula by influencing rainfall and river flow.

97. (D) Odisha
Chilika Lake is located on the eastern coast of India in the state of Odisha. It is the largest coastal lagoon in India and the second largest in the world. Spread across the Puri, Khurda, and Ganjam districts, the lake is a vital ecosystem that supports a large fishing community and serves as a major wintering ground for migratory birds from as far as Siberia.

98. (A) A river cutting a meander neck during floods.
An ox-bow lake is formed when a river in its mature stage develops pronounced meanders. During high water or a flood, the river may cut through the narrow neck of a meander to take a straighter, faster path. Over time, sediment deposits seal off the old loop from the main channel, leaving behind a crescent-shaped body of water known as an ox-bow lake.

99. (D) Wular, Pangong Tso, Gurudongmar, Tsomgo
Following a latitudinal sequence from north to south, Wular Lake in Jammu and Kashmir is the northernmost. Pangong Tso in Ladakh follows slightly to the south and east. Gurudongmar Lake is located at extreme altitude in northern Sikkim, and Tsomgo Lake is situated further south in the same state. This progression maps major high-altitude lakes across the northern and eastern Himalayan range.

100. (C) Inland drainage in an arid region with high evaporation.
The high salinity of Sambhar Lake is the result of its location in an arid region with high evaporation rates and inland drainage. As rainwater flows over the surrounding rocks, it leaches minerals and salts, carrying them into the lake. Since the lake has no outlet, the water can only escape through evaporation, which leaves the salts behind, causing them to concentrate over time.

NODIA

101. (A) III and V
Several statements about water disputes are correct, including the Kaveri, Narmada, and Godavari examples. However, statement III is incorrect because the Mahanadi dispute is between Odisha and Chhattisgarh, not Jharkhand. Statement V is also incorrect; under the Inter-State River Water Disputes Act, the Parliament has established a tribunal mechanism specifically to handle these cases, rather than them being handled exclusively by the Supreme Court.

102. (A) Masses of vegetation, soil, and organic matter floating on the lake.
Phumdis are unique, heterogeneous masses of vegetation, soil, and organic matter in various stages of decomposition that float on the surface of Loktak Lake in Manipur. They can vary in thickness and size, and the largest of them forms the Keibul Lamjao National Park. These floating islands are a critical ecological feature and provide the only habitat for the endangered Sangai deer.

103. (B) Ox-bow Lake
Kanwar Lake, located in the Begusarai district of Bihar, is a classic example of an ox-bow lake. It was formed by the meandering of the Gandak River, which eventually cut off a large loop, creating this permanent wetland. It is one of the largest freshwater ox-bow lakes in Asia and serves as an important habitat for many species of migratory and resident birds.

104. (D) Lakes in extinct volcano or meteorite impact depressions.
Crater lakes are circular bodies of water that form within the depressions of extinct volcanoes or in hollows created by meteorite impacts. These lakes are typically deep and have no major outlets. Lonar Lake in Maharashtra is a world-famous example of a crater lake formed by a meteorite impact in basaltic rock. Such formations provide valuable geological insights into past volcanic or celestial activity.

105. (C) Indus and Ganga
The Ambala ridge, located in Haryana, serves as a crucial drainage divide between the Indus River system to the west and the Ganga River system to the east. Although it is not a high mountain range, this subtle elevation is sufficient to direct the flow of water into these two distinct and massive river basins. It represents one of the most important hydrological boundaries in northern India.

106. (B) The largest wintering ground for migratory birds in India.
The ecological importance of Chilika Lake is best demonstrated by its status as the largest wintering ground for migratory birds on the Indian subcontinent. Every year, hundreds of thousands of birds from places as far away as Siberia and Central Asia migrate to the lake's diverse habitats. This high level of biodiversity led to its designation as India's first Ramsar site for wetland conservation.

107. (B) Both Statement I and II are true but II is not the reason for I.
It is true that the Ganga-Brahmaputra Delta is the world's largest and fastest-growing delta, and it is characterized by fertile soils and the Sundarbans mangroves. However, the presence of mangroves is a characteristic of the delta's environment rather than the cause of its rapid growth. The growth is primarily driven by the enormous sediment load carried by the rivers into the shallow sea.

108. (A) I, III, IV, II
Arranged from north to south, Wular Lake in Jammu and Kashmir is the northernmost. Moving south into the desert region, Sambhar Lake in Rajasthan is next. Continuing towards the east coast, Chilika Lake in Odisha follows. Finally, Vembanad Lake in Kerala is the southernmost among this group. This sequence highlights the geographical spread of major water bodies across the diverse climatic zones of India.

109. (D) It is a saltwater lake at over 4,000 meters elevation.
Pangong Tso is a high-altitude lake situated at over 4,000 meters in the Himalayas. It is a saltwater lake, which is unusual for such high elevations. A significant portion of the lake lies in Tibet, so it is not entirely within Ladakh. Despite its salinity, the lake completely freezes during the harsh winter months. It is an endorheic lake with no major river outlet.

110. (C) I, II, and IV
Statements regarding Lonar Lake are factually correct: it is in Maharashtra, its water is saline and alkaline, and it is situated in the basaltic rock of the Deccan Plateau. However, the statement that India has numerous active volcanic crater lakes in the Aravallis is incorrect. India has very little recent volcanic activity on its mainland, and the Aravallis are ancient fold mountains without volcanism.

111. (D) Article 262
Article 262 of the Indian Constitution specifically empowers the Parliament to provide for the adjudication of any dispute or complaint regarding the use, distribution, or control of the waters of any inter-state river or river valley. Under this provision, the Parliament enacted the Inter-State River Water Disputes Act in 1956, which allows for the creation of ad hoc tribunals to resolve conflicts.

112. (B) Phumdis - Habitat of the Sangai (brow-antlered deer).
Loktak Lake is ecologically unique due to its phumdis, which are floating islands made of

Click Here to Buy book on Amazon

organic matter. These phumdis provide the exclusive natural habitat for the Sangai, an endangered species endemic to Manipur. The Keibul Lamjao National Park, located on the largest phumdi, is the world's only floating national park, making the lake a site of global conservation importance and high ecological value.

113. (C) Kayals
The term kayals refers to the network of brackish water lagoons and lakes that run parallel to the Malabar coast in Kerala. These backwaters are formed by the action of waves and shore currents creating low barrier islands across the mouths of rivers. Kayals like Vembanad are vital for local transport, fishing, and tourism, and represent a unique hydrological feature of the southwestern coastal plains.

114. (B) Sediment deposition by a river entering a standing body of water.
A river delta is factual evidence of the geographical process of sediment deposition. As a river enters a standing body of water like a sea or lake, its velocity decreases abruptly. This loss of energy causes the river to drop its suspended load of silt, sand, and clay. Over time, these deposits build up to form a triangular or fan-shaped landform at the mouth.

115. (D) They form in regions with steep and swift river flows.
Most statements about ox-bow lakes in the Ganga plains are correct: they form in middle and lower courses, are isolated from the main channel, and eventually turn into swamps. However, the claim that they form in regions with steep and swift flows is incorrect. Ox-bow lakes require a very gentle gradient and slow-moving water, which allows the river to meander extensively and cut off loops.

116. (D) Manipur
Loktak Lake is located in the state of Manipur in Northeast India. It is the largest freshwater lake in the region and is famous for its floating islands called phumdis. The lake is central to the lives of the local people, providing water for irrigation, hydropower, and fisheries. It is also an important ecological site, hosting the Keibul Lamjao National Park and the endangered Sangai deer.

117. (D) An elevated land area that separates two adjacent basins.
A drainage divide or watershed boundary is an elevated land area, such as a mountain range or a ridge, that separates two adjacent drainage basins. It acts as a physical barrier that determines the direction in which surface runoff flows. Water falling on opposite sides of the divide will eventually drain into different river systems, making it a fundamental concept in regional hydrology and management.

NODIA

118. (D) Kerala
Vembanad Lake is situated in the state of Kerala and is the longest lake in India. It is the heart of the Kerala backwaters and spans several districts, including Alappuzha, Kottayam, and Ernakulam. The lake is famous for its rich biodiversity, traditional boat races, and scenic beauty. It also plays a vital role in the local economy through fishing, agriculture, and a thriving tourism industry.

119. (A) Tsomgo Lake - Sikkim
Tsomgo Lake, also known as Changu Lake, is a high-altitude glacial lake correctly paired with the state of Sikkim. In contrast, Gurudongmar is also in Sikkim, not Ladakh; Pangong Tso is in Ladakh, not Himachal Pradesh; and Roopkund is in Uttarakhand, not Arunachal Pradesh. Correctly identifying these mountain lakes is important for understanding the glacial geography and tourism potential of various Himalayan regions.

120. (A) It is a meteorite impact crater lake in the Deccan Plateau.
Lonar Lake is a unique geological feature located in the Buldhana district of Maharashtra. It is a meteorite impact crater lake formed in basaltic rock, making it one of the few such craters on Earth. The lake is saline and alkaline, and its circular shape is a direct result of the high-velocity impact thousands of years ago. It is a site of immense scientific interest.

121. (A) High tidal range and steep gradient causing sediment removal.
The formation of estuaries by west-flowing rivers in India is primarily influenced by the steep gradient of the Western Ghats and the high tidal range of the Arabian Sea. Because these rivers are short and flow down steep slopes, they have very

high velocity and minimal sediment deposition. Furthermore, strong tides at the river mouths efficiently sweep away sediment, preventing traditional delta formation.

122. (D) Streamflow sustained by groundwater discharge into the river.
In hydrology, base flow refers to the portion of streamflow that is sustained between precipitation events by the gradual discharge of groundwater into the river channel. This is the water that keeps a river flowing even during dry periods when there is no surface runoff from rain or snowmelt. It is a critical component for maintaining aquatic ecosystems and water availability throughout the entire year.

123. (C) States cannot appeal tribunal decisions to the Supreme Court under any jurisdiction.
Most statements about water dispute tribunals are correct: they are constituted under the 1956 Act and their decisions are binding but often delayed. However, the claim that states cannot appeal to the Supreme Court is incorrect. While the Act excludes the court's jurisdiction over the dispute itself, states often use Special Leave Petitions to challenge tribunal awards on various legal and procedural grounds.

124. (B) A large, shallow coast and a river with high sediment load.
For a delta to form, several specific conditions must be met: a river must carry a high sediment load and enter a standing body of water with a large, relatively shallow coastal shelf. Additionally, the marine environment at the river mouth should have minimal tidal variation and weak currents, which allows the sediment to settle and accumulate over time rather than being washed away.

125. (C) Deep borewell extraction
Percolation tanks, floodplain wetlands, and meander features are all natural or managed systems that facilitate the interaction between surface water and groundwater, often aiding in recharge. In contrast, deep borewell extraction is a method of removing water from underground aquifers. It is a human activity focused on water consumption rather than a process that supports the replenishment or natural storage of groundwater resources.

126. (A) They allow surface water to percolate and replenish aquifers.
Rivers and lakes play a crucial role in the hydrological cycle by facilitating groundwater recharge. In many regions, surface water from these bodies slowly percolates through the porous soil and rock layers of the riverbed or lake bottom. This process replenishes the underlying aquifers, helping to maintain groundwater levels. This natural interaction is essential for sustaining water supplies across different climatic zones in India.

127. (A) P-2, Q-1, R-4, S-3
Major Indian rivers have distinct characteristics at their mouths. The Ganga forms a massive arcuate delta. The Narmada empties into the Gulf of Khambhat through an estuary. The Godavari creates a large lobate delta on the east coast. The Tapti forms an estuary near the city of Surat. These features are determined by the river's sediment load, the coastal gradient, and the tidal energy.

128. (D) A coastal body where freshwater from rivers mixes with saltwater.
An estuary is a partially enclosed coastal body of water where freshwater from rivers and streams mixes with saltwater from the ocean. It is a highly productive and dynamic environment, characterized by varying salinity levels and unique ecosystems. Unlike a delta, which is a landform made of deposited sediment, an estuary is primarily defined by the mixing of different water types in coastal settings.

129. (A) It facilitates deep-water inland navigation and supports rich fisheries.
The Narmada estuary is ecologically and economically significant because its broad and deep channel facilitates inland navigation and supports a rich variety of fisheries. It provides a nursery ground for many marine species and is famous for the Hilsa fish. This mixing zone of fresh and salt water creates a nutrient-rich environment that sustains local livelihoods and contributes to the biodiversity of the coast.

130. (B) It increases water retention time and infiltration capacity.
The ecological restoration of urban lakes is vital for groundwater recharge because it increases the

Downloaded from www.pdf.tube

water retention time and the infiltration capacity of the lake bed. By removing silt and preventing the use of impermeable linings, restoration allows more rainwater to seep into the ground. This process helps replenish local aquifers, which is crucial for maintaining water tables and ensuring sustainable urban water security.

www.nodia.in

NODIA

CHAPTER 03

Climate of India and Global Climate Phenomena

1. Which of the following statements correctly defines the onset of the monsoon in India?
(A) Movement of the monsoon trough toward the foothills of the Himalayan range.
(B) Gradual replacement of moist summer winds by the dry winter wind patterns.
(C) Arrival of cyclonic Western Disturbances across the regions of North India.
(D) Sudden transition from hot dry weather to widespread rains over Kerala.

2. The winter rainfall in Tamil Nadu and the southeast coast of India is primarily caused by:
(A) Western Disturbances
(B) Pre-monsoon showers
(C) Northeast monsoon
(D) Southwest monsoon

3. Which important line of latitude passes roughly through the middle of India, dividing the country into tropical and subtropical climatic zones?
(A) Equator
(B) Tropic of Capricorn
(C) Tropic of Cancer
(D) Arctic Circle

4. The following question consists of two statements — Assertion (A) and Reason (R). Answer the question by selecting the appropriate option.
Assertion (A): The occurrence of El Nino often leads to drought-like conditions in India.
Reason (R): El Nino disrupts the normal Walker Circulation, leading to sinking air and high pressure over the Indian Ocean region.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

5. Which of the following statements regarding the ITCZ over the Indian subcontinent is incorrect?
(A) It is often referred to as the monsoon trough during the summer season.
(B) It represents a zone of high atmospheric pressure.
(C) Its northward shift facilitates the withdrawal of the westerly jet stream from the Indian plains.
(D) It encourages the equatorial maritime air mass to cross the equator and reach India.

6. Which of the following is the most appropriate description of oceanic upwelling during La Nina?
(A) Upwelling of cold, nutrient-rich water weakens off the South American coast.
(B) Upwelling of cold, nutrient-rich water intensifies off the South American coast.
(C) Upwelling of warm water strengthens in the central Pacific.
(D) Upwelling ceases entirely across the Pacific basin.

7. Which of the following factors is primarily responsible for the moderating effect on the climate of coastal cities in India?
(A) High altitude
(B) Proximity to the sea
(C) Proximity to the equator
(D) Presence of jet streams

8. The normal date for the onset of the Southwest monsoon over the Kerala coast is:
(A) 1st May
(B) 1st June
(C) 15th June
(D) 1st July

Click Here to Buy book on Amazon

9. El Nino is an oceanic phenomenon characterized by:
(A) The abnormal cooling of surface waters in the eastern tropical Pacific.
(B) The abnormal warming of surface waters in the eastern tropical Pacific.
(C) The development of low pressure over the Indian Ocean.
(D) The reversal of ocean currents in the Atlantic Ocean.

10. The Inter Tropical Convergence Zone (ITCZ) is best defined as a:
(A) High-pressure belt in subtropical latitudes where anticyclonic cells form.
(B) Permanent wind system flowing from polar regions toward the equatorial belt.
(C) Low-pressure trough in equatorial latitudes where trade winds converge.
(D) Cold ocean current system impacting regional tropical rainfall distribution.

11. The ENSO cycle is a global climate phenomenon. What does the acronym ENSO stand for?
(A) Equatorial North-South Oscillation
(B) Eastern North Sea Oscillation
(C) Equatorial Northern Storm Oscillation
(D) El Nino-Southern Oscillation

12. The word "monsoon" is derived from the Arabic word "Mausim." What is its literal meaning?
(A) Torrential rainfall during the summer months
(B) Intense low-pressure atmospheric system
(C) Seasonal reversal of wind direction
(D) Localized convectional thunderstorm activity

13. The withdrawal of the Southwest monsoon normally begins from which part of India?
(A) North-Western states
(B) Kerala coast
(C) North-Eastern states
(D) Coromandel coast

14. Which of the following best defines a jet stream?
(A) A slow-moving ocean current in the Pacific
(B) A surface wind blowing from the sea to the land
(C) A narrow band of strong winds blowing in the upper troposphere
(D) A cyclonic storm originating in the Mediterranean Sea

15. The occurrence of a strong La Nina phase generally results in:
(A) Occurrence of significantly deficient monsoon rainfall across the country.
(B) Extreme drop in winter temperatures throughout the southern Peninsular region.
(C) Suppression of cyclonic storm formation within the Bay of Bengal region.
(D) Above-normal and often flood-inducing monsoon rainfall in India.

16. The decrease in temperature with increasing elevation in the troposphere, which explains why hill stations in India are cooler than plains, is known as the:
(A) Normal lapse rate
(B) Albedo effect
(C) Temperature inversion
(D) Coriolis effect

17. El Nino forms off the coast of which of the following countries?
(A) Peru and Ecuador
(B) Australia
(C) South Africa
(D) India and Sri Lanka

18. What is the effect of the intense heating of the Tibetan Plateau during summer on the Indian monsoon?
(A) Formation of a strong low-pressure zone attracting southwest monsoon winds.
(B) Creation of a stable high-pressure zone repelling moisture-laden air masses.
(C) Total withdrawal of the Tropical Easterly Jet from the upper atmosphere.
(D) Immediate triggering of the El Nino oscillation across the Pacific Ocean.

19. Which of the following represents the correct chronological sequence of the normal onset dates of the Southwest monsoon?
(A) Kerala Coast, Mumbai, New Delhi, Punjab
(B) Mumbai, Kerala Coast, Punjab, New Delhi
(C) Kerala Coast, New Delhi, Mumbai, Punjab
(D) Punjab, New Delhi, Mumbai, Kerala Coast

NODIA

20. Consider the following statements regarding Jet Streams and the Indian Monsoon:
I. The Subtropical Westerly Jet Stream moves north of the Himalayas in summer.
II. The Tropical Easterly Jet Stream develops during the winter season over India.
III. The presence of the Tropical Easterly Jet helps in driving the Southwest monsoon.
Which of the above statement(s) is/are correct?
(A) I and III only
(B) I and II only
(C) II and III only
(D) I, II and III

21. The Southern Oscillation Index (SOI) measures the difference in surface air pressure between which two locations?
(A) Mumbai and Madagascar
(B) Lima and Jakarta
(C) Tahiti and Darwin
(D) Hawaii and Tokyo

22. According to the classical thermal concept proposed by Edmund Halley, the Indian monsoon is primarily driven by:
(A) The migration of the Inter Tropical Convergence Zone
(B) The differential heating and cooling of land and water
(C) The shifting of the subtropical westerly jet stream
(D) The occurrence of the El Nino phenomenon

23. Consider the following statements regarding the Inter Tropical Convergence Zone (ITCZ):
I. During the Indian summer, the ITCZ shifts northwards over the Ganga plain.
II. The shifting of the ITCZ to the south of the equator causes the onset of the southwest monsoon.
Which of the above statement(s) is/are correct?
(A) I only
(B) II only
(C) Both I and II
(D) Neither I nor II

24. Identify the incorrect statement regarding the impact of El Nino on the Indian monsoon:
(A) El Nino is associated with the general weakening of the Indian monsoon.
(B) It causes a significant delay in the onset of the Southwest monsoon rains.
(C) It creates a persistent high-pressure anomaly over the Indian subcontinent.
(D) It leads to an increase in severe flood frequency across central India.

25. Identify the incorrect pair regarding the branches of the Southwest monsoon:
(A) Arabian Sea branch - Reaches Mumbai by June 10
(B) Bay of Bengal branch - Causes heavy rainfall in the Western Ghats
(C) Bay of Bengal branch - Deflected by Arakan Yoma towards the Indian subcontinent
(D) Arabian Sea branch - Merges with the Bay of Bengal branch over the Ganga plains

26. Identify the odd one out among the factors controlling the climate of India:
(A) Altitude
(B) Distribution of land and water
(C) Distance from the sea
(D) Longitude

27. La Nina is conceptually the opposite of El Nino. It is characterized by:
(A) Unusually cold ocean temperatures in the Equatorial Pacific.
(B) Unusually warm ocean temperatures in the Equatorial Pacific.
(C) A complete halt of the trade winds in the Pacific.
(D) The shifting of the ITCZ permanently to the southern hemisphere.

NODIA

28. Match List-I (Local Weather Phenomenon) with List-II (Region/State) by selecting the correct combination from the options provided:
List I: (Local Weather Phenomenon)
P. Mango showers
Q. Blossom showers
R. Kalbaisakhi
S. Loo
List II: (Region/State)
1. West Bengal
2. Kerala
3. Karnataka
4. Northern Plains
(A) P-2, Q-3, R-1, S-4
(B) P-3, Q-2, R-1, S-4
(C) P-2, Q-3, R-4, S-1

(D) P-1, Q-4, R-3, S-2

29. Which statement correctly distinguishes the Northeast monsoon from the Southwest monsoon?
(A) Northeast monsoon carries higher moisture content than the Southwest monsoon.
(B) Northeast monsoon originates primarily within the southern Indian Ocean.
(C) Northeast monsoon winds travel from land to sea, making them mostly dry.
(D) Northeast monsoon accounts for eighty percent of the total annual rainfall.

30. How does the withdrawal of the Subtropical Westerly Jet Stream from north of the Himalayas affect Indian weather?
(A) It brings extreme cold waves to North India.
(B) It causes intense fog over the Indo-Gangetic plains.
(C) It stops the formation of the monsoon trough.
(D) It triggers the onset of the Southwest monsoon.

31. Which upper-air circulation system is responsible for steering Western Disturbances towards the Indian subcontinent?
(A) Tropical Easterly Jet
(B) Polar Night Jet
(C) Subtropical Westerly Jet
(D) Equatorial Westerlies

32. The "Loo" is a characteristic summer wind in North India. Which of the following best describes its properties?
(A) Cold and humid
(B) Hot and dry
(C) Cool and dry
(D) Hot and humid

33. A "Positive Indian Ocean Dipole" (IOD) is defined by:
(A) Cooler sea surface temperatures in the western Indian Ocean relative to the east.
(B) Warmer sea surface temperatures in the western Indian Ocean relative to the east.
(C) Uniform warming of the entire Indian Ocean.
(D) A sudden drop in salinity in the Bay of Bengal.

34. According to Koppen's climate classification, the "Amw" climate type represents:
(A) Tropical savanna climate found in the peninsular plateau.
(B) Semi-arid steppe climate common in northwestern parts.
(C) Hot desert climate occurring in the western regions of Rajasthan.
(D) Tropical monsoon climate with a short dry winter season.

35. The "monsoon trough" is best described as:
(A) Low-pressure area running parallel to the Himalayas during monsoon.
(B) High-pressure ridge extending from Rajasthan toward the Bay of Bengal.
(C) Cyclonic depression forming exclusively within the Arabian Sea region.
(D) Fast-moving wind current located in the upper levels of the atmosphere.

36. Identify the correct statement regarding the "BShw" climate type in India:
(A) Semi-arid steppe climate in NW India and leeward Western Ghats.
(B) Humid subtropical climate prevailing across the entire Ganga plains.
(C) Cold alpine climate characteristic of the higher Himalayan ranges.
(D) Heavy monsoon rainfall patterns exceeding 200 cm of rain annually.

37. Consider the following statements regarding the Walker Circulation:
I. It is an east-west atmospheric circulation over the tropical Pacific Ocean.
II. During an El Nino event, the Walker Circulation strengthens significantly.
Which of the above statement(s) is/are correct?
(A) I only
(B) II only
(C) Both I and II
(D) Neither I nor II

38. Identify the correct pair regarding pre-monsoon showers and their significance:
(A) Blossom showers - Destructive to the growth of tea plantations in Assam.
(B) Norwesters - Gentle cooling breezes that lower temperatures in Rajasthan.
(C) Loo - Moisture-laden winds that trigger

Downloaded from www.pdf.tube

early monsoon rains in Punjab.
(D) Mango showers - Aid early ripening of mangoes in Kerala and Karnataka.

39. Identify the incorrect statement regarding the general rainfall distribution in India:
(A) Rainfall decreases from east to west in the Northern Plains region.
(B) The windward side of the Western Ghats receives extremely high rainfall.
(C) Interior parts of the Deccan Plateau remain a rain-shadow region.
(D) Coromandel coast receives maximum rainfall during summer monsoon.

40. What is a direct consequence of the passage of a Western Disturbance across North India during winter?
(A) A sudden increase in daytime temperatures for several weeks
(B) The onset of hot, dry 'Loo' winds
(C) The immediate withdrawal of the Northeast monsoon
(D) A brief spell of warmer weather followed by a severe cold wave

41. Pune receives significantly less rainfall than Mumbai despite being located relatively close by. This is best explained by the fact that Pune:
(A) Is situated at a significantly lower altitude than Mumbai.
(B) Lies in the rain-shadow area on the leeward Western Ghats.
(C) Is located too far inland for moist monsoon winds to reach.
(D) Is protected by the rain-blocking effect of the Aravalli range.

42. Consider the following statements regarding the Indian Ocean Dipole (IOD) and ENSO:
I. A Positive IOD can counteract the negative impacts of El Nino on the Indian monsoon.
II. The IOD is an atmosphere-ocean coupled phenomenon limited strictly to the Pacific Ocean.
III. A Negative IOD coupled with El Nino causes severe drought in India.
IV. The IOD operates entirely independently and never occurs during an ENSO year.
Which of the above statements are incorrect?
(A) I and III
(B) I and II
(C) II and IV
(D) III and IV

43. "Kalbaisakhi," a type of violent thunderstorm occurring in the pre-monsoon season, is most prominently experienced in which state?
(A) Gujarat
(B) West Bengal
(C) Maharashtra
(D) Tamil Nadu

44. A "break" in the monsoon over the northern plains of India is primarily caused by:
(A) Strengthening of the Somali Jet across the western Indian Ocean.
(B) Sudden arrival of a Western Disturbance from the Mediterranean Sea.
(C) Formation of an intense cyclonic depression over the Bay of Bengal.
(D) Shifting of the monsoon trough closer to the Himalayan foothills.

NODIA

45. The major part of Madhya Pradesh falls under which climate type according to Koppen's classification?
(A) Amw and As
(B) BWhw and BShw
(C) Aw and Cwg
(D) Dfc and E

46. Identify the correct statement about a Negative Indian Ocean Dipole (IOD):
(A) It generally acts to enhance the total Southwest monsoon rainfall in India.
(B) It is detrimental to the Southwest monsoon, often causing deficit rainfall.
(C) It is characterized by warmer sea surface waters in the western Indian Ocean.
(D) It usually brings severe drought conditions to the northern Australian coast.

47. Which of the following regions is an exception to the high rainfall zones of India?
(A) Meghalaya Plateau
(B) Western Rajasthan
(C) Western slopes of the Western Ghats
(D) Arunachal Pradesh

48. The winter precipitation caused by Western Disturbances in North India is locally known as

'Mahawat'. It is highly beneficial for which type of crop cultivation?
(A) Kharif crops
(B) Rabi crops
(C) Zaid crops
(D) Plantation crops

49. Arrange the following regions in the correct sequence representing the normal progression of the withdrawal of the Southwest monsoon:
I. North-Western Plains
II. Central India (Madhya Pradesh)
III. Deccan Plateau
IV. Southern Peninsula
(A) I, II, III, IV
(B) IV, III, II, I
(C) I, III, II, IV
(D) II, I, IV, III

50. Consider the following statements regarding the break monsoon phenomenon:
I. During a monsoon break, rainfall increases significantly over the Himalayan foothills and Northeast India.
II. The western coast of India typically experiences a dry spell during this break period.
Which of the above statement(s) is/are correct?
(A) I only
(B) II only
(C) Both I and II
(D) Neither I nor II

51. The heavy rainfall experienced on the western slopes of the Western Ghats is primarily due to:
(A) Cyclonic rainfall
(B) Convectional rainfall
(C) Frontal rainfall
(D) Orographic rainfall

52. Western Disturbances, which affect India's winter climate, originate primarily over the:
(A) Caspian Sea
(B) Black Sea
(C) Red Sea
(D) Mediterranean Sea

53. Which of the following crops is NOT typically benefited by the winter rainfall brought by Western Disturbances?
(A) Wheat
(B) Mustard
(C) Jute
(D) Gram

54. Which of the following statements about the seasonal variation of temperature in India is correct?
(A) In winter, the isotherms generally run parallel to the longitudes.
(B) Peninsular India experiences severe cold winters with sub-zero temperatures.
(C) The diurnal range of temperature is extremely high in the Thar Desert.
(D) Coastal areas experience a massive annual range of temperature compared to the interior.

55. "Blossom showers" are crucial for the flowering of which plantation crop in Kerala and nearby areas?
(A) Coffee
(B) Tea
(C) Rubber
(D) Cardamom

56. Identify the correct pair linking the Indian Ocean Dipole phases and their typical impact on Indian rainfall:
(A) Positive IOD - Enhanced monsoon rainfall
(B) Negative IOD - Enhanced monsoon rainfall
(C) Positive IOD - Deficient monsoon rainfall
(D) Neutral IOD - Complete failure of the monsoon

57. Which Koppen climate classification best describes the Coromandel coast of Tamil Nadu?
(A) As
(B) Aw
(C) Cwg
(D) BShw

58. Match List-I (Climatic Classification Code by Koppen) with List-II (Region in India) by selecting the correct combination from the options provided:
List I: (Climatic Classification Code by Koppen)
P. Amw
Q. As
R. BShw
S. Cwg
List II: (Region in India)

Click Here to Buy book on Amazon

1. Coromandel Coast
2. Ganga Plain (and parts of MP)
3. Malabar Coast (Western Ghats)
4. Semi-arid steppe (NW India)

(A) P-3, Q-1, R-4, S-2
(B) P-1, Q-3, R-2, S-4
(C) P-3, Q-4, R-1, S-2
(D) P-2, Q-1, R-4, S-3

59. During the summer season, which region generally records the highest temperatures in India?
(A) Southern regions of the Western Ghats.
(B) Coastal plains of the state of Odisha.
(C) Northwestern India and the Thar Desert.
(D) Eastern parts of the Brahmaputra Valley.

60. Which of the following is the most appropriate description of weather conditions in central India (including Madhya Pradesh) during a "break" in the monsoon?
(A) Continuous torrential rainfall for several days
(B) Dry weather with a rise in daytime temperatures
(C) Severe thunderstorms and hail
(D) Heavy snowfall in higher elevated areas like Pachmarhi

61. The phenomenon of "temperature inversion" in northern India during winter is characterized by:
(A) A sudden and rapid increase in the temperature at the surface.
(B) Daytime temperature being consistently lower than at nighttime.
(C) Temperature increasing with increasing altitude in lower atmosphere.
(D) Rapid cooling of the stratospheric layers during the winter season.

62. The Inter Tropical Convergence Zone (ITCZ) is a region characterized by:
(A) Converging winds and ascending air
(B) Diverging winds and sinking air
(C) High pressure and clear skies
(D) Polar easterlies meeting westerlies

63. Identify the correct statement regarding the climate of Madhya Pradesh:
(A) It experiences a continental climate due to its landlocked nature.
(B) It has a purely maritime climate with high humidity year-round.
(C) It receives rainfall exclusively from the Bay of Bengal branch.
(D) It lacks a distinct winter season due to its equatorial location.

64. Consider the following statements regarding the Koppen classification applied to Madhya Pradesh:
I. The northern parts around Gwalior belong to the Cwg climate.
II. The southern and western parts like Malwa fall under the Aw climate.
III. The BShw climate covers the entire eastern boundary of the state.

Which of the above statement(s) is/are correct?
(A) II and III only
(B) I and III only
(C) I and II only
(D) I, II and III

NODIA

65. Conceptually, if the Himalayas were absent, what would be the most likely impact on India's climate?
(A) North India would face severe winter cold, like a cold desert.
(B) The entire country would receive double its current annual rainfall.
(C) The Bay of Bengal branch of the monsoon would become dormant.
(D) South India would become an entirely arid and moistureless region.

66. The presence of the Subtropical Westerly Jet over North India in winter aids in:
(A) Bringing extratropical Western Disturbances into NW India.
(B) Steering tropical cyclones from the Bay of Bengal into land.
(C) Pulling the Southwest monsoon winds into the subcontinent.
(D) Direct formation of the Indian Ocean Dipole phenomenon.

67. Consider the following statements regarding the Bay of Bengal branch of the Southwest monsoon:
I. It is deflected towards the Indian subcontinent by the Arakan Yoma

mountains of Myanmar.
II. It brings heavy rainfall to the northeastern states before moving westward along the Himalayas.

Which of the above statement(s) is/are correct?
(A) I only
(B) II only
(C) Both I and II
(D) Neither I nor II

68. In India, the altitude effect leads to varied climates. For every 1000 meters of ascent, the temperature drops approximately by:
(A) 3.5 degrees Celsius
(B) 6.5 degrees Celsius
(C) 9.8 degrees Celsius
(D) 12.0 degrees Celsius

69. The dynamic theory of the monsoon, which emphasizes the shifting of pressure belts, was prominently advocated by:
(A) Hermann Flohn
(B) Edmund Halley
(C) Alfred Wegener
(D) W.M. Davis

70. Which of the following statements about the variability of monsoon rainfall in India is correct?
(A) Regions of high rainfall usually exhibit high annual variability.
(B) The coefficient of variation is uniform across the entire country.
(C) Areas of low rainfall exhibit high variability in the monsoon.
(D) Northeast regions show the highest rainfall variability in India.

71. Which of the following districts in Tamil Nadu benefits immensely from the Northeast monsoon?
(A) Chennai
(B) Nilgiris
(C) Kanyakumari
(D) Coimbatore

72. Consider the following statements regarding the climate of Madhya Pradesh:
I. The Tropic of Cancer passes through the state, heavily influencing its temperature.
II. The eastern parts of the state generally receive more rainfall than the western parts.
III. It receives rainfall from both the Arabian Sea and the Bay of Bengal branches.
IV. The northern districts like Gwalior experience an extreme climate.
V. The Malwa plateau region enjoys a relatively moderate and even climate.

Which of the above statement(s) is/are correct?
(A) I, II, III, IV and V
(B) I, II and III only
(C) II, III, IV and V only
(D) I, IV and V only

73. Which of the following mechanisms best explains the origin of the winter monsoon in India?
(A) Intense heating of the Tibetan plateau during winter months.
(B) Arrival of the Southwest winds from the southern Indian Ocean.
(C) The warming of surface waters within the Mediterranean Sea.
(D) High-pressure center over NW India and central Asia.

74. Which of the following is the most appropriate description of the agricultural impact caused by a significant delay in the onset of the monsoon?
(A) It drastically increases the total yield of winter Rabi crops.
(B) It promotes the early ripening of tropical plantation crops.
(C) Disrupts Kharif sowing, potentially reducing agricultural output.
(D) It entirely prevents soil moisture formation for the whole year.

75. The Tropical Easterly Jet Stream is primarily driven by:
(A) The cold anomalies in the Indian Ocean.
(B) The shifting of the Bermuda High.
(C) The rotation of the earth near the poles.
(D) The intense heating of the Tibetan Plateau.

76. Which of the following is the most appropriate reason why the Arabian Sea branch of the Southwest monsoon is stronger than the Bay of Bengal branch?
(A) The Arabian Sea remains substantially warmer than the Bay of Bengal.
(B) The Arabian Sea branch is blocked

Downloaded from www.pdf.tube

completely by the Eastern Ghats.
(C) The Bay of Bengal branch flows predominantly toward the Australian coast.
(D) Arabian Sea branch feeds from more water and hits the landmass fully.

77. Which of the following events acts as a trigger for the sudden "burst" of the Indian monsoon?
(A) Formation of an intense anticyclone over the Arabian Sea
(B) Strengthening of the Subtropical Westerly Jet
(C) Freezing of the Bay of Bengal surface waters
(D) Sudden onset of the Tropical Easterly Jet

78. The permanent snowline in the Himalayas varies regionally. Which of the following is true regarding the snowline in the Eastern Himalayas compared to the Western Himalayas?
(A) It is located at exactly the same altitude across both regions.
(B) It is generally lower in altitude primarily due to much higher levels of precipitation.
(C) It is non-existent because the Eastern Himalayas are too low.
(D) It is generally higher in altitude due to its lower latitude.

79. Which of the following represents the correct sequence of locations in decreasing order of their annual rainfall?
(A) Cherrapunji, Kolkata, Allahabad, Delhi
(B) Kolkata, Cherrapunji, Delhi, Allahabad
(C) Cherrapunji, Delhi, Allahabad, Kolkata
(D) Delhi, Allahabad, Kolkata, Cherrapunji

80. The specific heat capacity of water is much higher than that of land. How does this physical property influence the Indian climate?
(A) It makes the oceans extremely cold during the summer months.
(B) It prevents any significant evaporation from the Arabian Sea.
(C) It is the primary factor responsible for Himalayan formation.
(D) Causes land to heat and cool faster, driving wind reversal.

81. The progress of the Southwest monsoon across India is heavily influenced by the presence of mountain ranges. The Aravalli Range fails to induce heavy rainfall in Rajasthan because:
(A) It is too tall for moisture-laden clouds to cross over.
(B) It is covered with dense forests that absorb all moisture.
(C) It lies parallel to the Arabian Sea branch of the monsoon.
(D) It creates a permanent high-pressure zone around itself.

82. Find the odd one out concerning the factors that shape the climate of Madhya Pradesh:
(A) Proximity to the sea
(B) Its central, landlocked location
(C) Passage of the Tropic of Cancer
(D) Presence of the Vindhyan and Satpura ranges

83. The Himalayas act as a major climatic barrier. What is the primary effect of this barrier during the winter season?
(A) It traps southwest monsoon winds, causing heavy winter rain.
(B) It forces the jet stream to flow exclusively to its south side.
(C) It causes the El Nino effect to bypass the Indian landmass.
(D) Blocks cold, dry Central Asian winds from the subcontinent.

NODIA

84. The position of the ITCZ is not stationary. Over India, during the peak of summer (July), it is roughly located:
(A) Along the equator
(B) Around 10°S latitude
(C) Around 20°N to 25°N latitude
(D) North of the Himalayas (around 40°N)

85. The Tropic of Cancer passes through 8 Indian states. Which of the following states is NOT one of them?
(A) Gujarat
(B) Madhya Pradesh
(C) Odisha
(D) Jharkhand

86. Which place in Madhya Pradesh receives the highest annual rainfall?
(A) Gwalior
(B) Pachmarhi

(C) Ujjain
(D) Rewa

87. When the monsoon trough shifts southward and remains over the central part of India (including Madhya Pradesh), the result is:
(A) A severe break in the monsoon for the central Indian region.
(B) Active monsoon conditions with widespread regional rainfall.
(C) Intense drought across the entirety of the Deccan plateau.
(D) Total withdrawal of the monsoon from the entire country.

88. Match List-I (Monsoon Phenomenon) with List-II (Associated Factor/Cause) by selecting the correct combination from the options provided:
List I: (Monsoon Phenomenon)
P. Break in monsoon
Q. Winter rain in Northwest India
R. Burst of monsoon
S. Winter rain in Tamil Nadu
List II: (Associated Factor/Cause)
1. Western Disturbances
2. Northeast trade winds
3. Shift of monsoon trough to foothills
4. Sudden arrival of maritime tropical air mass
(A) P-1, Q-3, R-2, S-4
(B) P-3, Q-1, R-4, S-2
(C) P-4, Q-2, R-3, S-1
(D) P-3, Q-1, R-2, S-4

89. The climate of a place located in the interior of the Indian subcontinent (far from the sea) is typically:
(A) Equable
(B) Continental
(C) Maritime
(D) Mediterranean

90. Identify the correct pair linking a monsoon rainfall anomaly with its typical agricultural consequence in India:
(A) Early withdrawal - Moisture stress for late-maturing Kharif crops.
(B) Prolonged monsoon break - Ideal conditions for paddy transplantation.
(C) Excess early rainfall - Beneficial for harvesting of all Rabi crops.
(D) Failure of Northeast monsoon - Leads to drought in Punjab and Haryana.

91. In the context of the ENSO cycle, 'Neutral' conditions imply:
(A) The simultaneous occurrence of both El Nino and La Nina events.
(B) Equatorial Pacific surface temperatures near long-term average.
(C) Atmospheric Walker circulation operating in a reverse direction.
(D) Complete absence of the trade wind systems in the Pacific basin.

92. During the Southwest monsoon, if the monsoon trough shifts closer to the Himalayas, the plains of North India typically experience:
(A) Devastating floods
(B) Continuous heavy downpours
(C) A sharp decrease in rainfall
(D) Formation of intense cyclones

93. During a La Nina event, the trade winds over the Equatorial Pacific:
(A) Weaken significantly
(B) Reverse their direction entirely
(C) Strengthen considerably
(D) Remain completely unaffected

94. Consider the following statements regarding Western Disturbances:
I. They originate in the Mediterranean region.
II. They travel eastward across Iran and Pakistan before reaching India.
III. They are extratropical cyclones.
IV. They provide essential moisture for Rabi crops.
V. They are steered by the Subtropical Westerly Jet stream.
Which of the above statement(s) is/are correct?
(A) I, II, and IV only
(B) II, III, IV, and V only
(C) I, II, III, IV, and V
(D) I, III, and V only

95. Which specific weather condition over the Indian Ocean is associated with a Positive IOD?
(A) Anomalous cooling in the western Indian Ocean and warming in the east.
(B) Enhanced convection and increased rainfall over the western Indian Ocean.
(C) Sinking air and suppressed rainfall over the

Click Here to Buy book on Amazon

western Indian Ocean.
(D) Complete disappearance of the monsoon winds.

96. Seasonal variation in wind patterns over India, blowing from sea to land in summer and land to sea in winter, is fundamentally caused by:
(A) Seasonal gravitational pull exerted by the moon on the atmosphere.
(B) Differential heating and cooling of landmass and ocean.
(C) Rotational force of the Earth acting alone on the wind patterns.
(D) Constant shifting of the magnetic poles of the earth over time.

97. The term 'El Nino' translates to "The Little Boy" in Spanish. This name was originally given because the phenomenon usually becomes noticeable around:
(A) Easter
(B) Thanksgiving
(C) The summer solstice
(D) Christmas

98. In addition to bringing rainfall, Western Disturbances also occasionally bring which of the following to the lower Himalayas?
(A) Snowfall
(B) Sandstorms
(C) Loo winds
(D) Tropical cyclones

99. The term "Norwesters" (or Kalbaisakhi) is used for violent storms occurring primarily during which season?
(A) Peak winter (January)
(B) Pre-monsoon summer (April-May)
(C) Active monsoon (July)
(D) Post-monsoon (November)

100. How does ENSO variability directly affect Indian agriculture?
(A) Altering the basic soil composition in the northern plains.
(B) Changing the mean altitude of the major Himalayan ranges.
(C) Influencing timing, distribution, and quantum of monsoon rain.
(D) Causing sudden and significant shifts in the tectonic plates.

101. Which branch of the Southwest monsoon first hits the Andaman and Nicobar Islands?
(A) The Bay of Bengal branch
(B) The Arabian Sea branch
(C) The Western Disturbance branch
(D) The Northeast monsoon branch

102. The following question consists of two statements — Assertion (A) and Reason (R). Answer the question by selecting the appropriate option.
Assertion (A): The Tamil Nadu coast remains relatively dry during the Southwest monsoon season.
Reason (R): The Tamil Nadu coast is situated parallel to the Bay of Bengal branch of the monsoon and lies in the rain shadow area of the Arabian Sea branch.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

103. Cold wave conditions in states like Madhya Pradesh during winter are usually triggered by:
(A) Sudden increase in oceanic temperatures within the Bay of Bengal.
(B) Northward cold winds following a Western Disturbance passage.
(C) Seasonal arrival of the Northeast monsoon winds in the region.
(D) Temporary northward shift of the ITCZ into the upper latitudes.

104. The eastward movement of Western Disturbances is facilitated by which prevailing global wind belt?
(A) Trade winds
(B) Polar easterlies
(C) Doldrums
(D) Westerlies

105. Which region in India is characterized by having less than 50 cm of annual rainfall, placing it in a low rainfall zone?
(A) Parts of Gangetic West Bengal.
(B) Coastal plains of state of Odisha.
(C) Western Rajasthan and Northern Gujarat.
(D) Brahmaputra Valley in the northeast.

Downloaded from www.pdf.tube

106. The relationship between El Nino and the Indian monsoon was heavily studied by Sir Gilbert Walker. What did he discover?
(A) Positive correlation between El Nino and increased monsoon rain.
(B) Negative correlation where El Nino coincides with poor monsoons.
(C) Finding that El Nino completely stops the formation of the ITCZ.
(D) Observation that El Nino only affects winter rainfall in India.

107. "Mango showers" are predominantly experienced in:
(A) Kerala and Coastal Karnataka
(B) Punjab and Haryana
(C) Assam and Meghalaya
(D) Gujarat and Rajasthan

108. The atmospheric component of the El Nino phenomenon is known as:
(A) The Southern Oscillation
(B) The Madden-Julian Oscillation
(C) The North Atlantic Oscillation
(D) The Pacific Decadal Oscillation

109. Arrange the following states in the correct sequential order of the movement of a typical Western Disturbance (from West to East):
I. Haryana
II. Jammu and Kashmir
III. Uttar Pradesh
IV. Bihar
Which of the following is the correct sequence?
(A) II, I, III, IV
(B) I, II, IV, III
(C) II, III, I, IV
(D) IV, III, I, II

110. Consider the following statements regarding El Nino and La Nina:
I. El Nino causes the thermocline to deepen in the eastern Pacific.
II. La Nina enhances the normal trade winds across the Pacific.
III. El Nino leads to increased rainfall in the central and eastern tropical Pacific.
IV. Both El Nino and La Nina drastically alter the global atmospheric circulation.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II, III and IV only
(C) I, II, III and IV
(D) I, III and IV only

111. During the winter season, the general direction of surface winds over the Indian subcontinent is:
(A) South-westerly
(B) South-easterly
(C) North-westerly
(D) North-easterly

112. When the Southern Oscillation Index (SOI) is strongly negative, it indicates:
(A) The presence of a strong La Nina.
(B) The presence of a strong El Nino.
(C) Normal monsoon conditions in India.
(D) A highly positive Indian Ocean Dipole.

113. The Indian Ocean Dipole (IOD) is measured by calculating the difference in sea surface temperature between:
(A) Surface temperature difference between the Arabian Sea and the Bay of Bengal.
(B) Temperature gradient between the southern tip of India and the Antarctic coast.
(C) Difference between western and eastern poles in the Indian Ocean.
(D) Marine temperature difference recorded between the Red Sea and Persian Gulf.

NODIA

114. What is the main characteristic impact of the "Loo" on human life in North and Central India?
(A) Causes widespread cases of frostbite and extreme hypothermia.
(B) Can lead to severe heatstroke and dehydration.
(C) Brings immediate relief from periods of extreme humidity.
(D) Triggers significant and sudden major urban flooding events.

115. Severe foggy winters in North India are often associated with:
(A) Atmospheric instability following pre-monsoon summer showers.
(B) General retreating phase of the Southwest monsoon wind system.
(C) Persistent presence of a strong Tropical Easterly Jet stream.
(D) Moisture from Western Disturbances

combined with low temperatures.

116. While La Nina usually brings good rainfall to India, an exceptionally strong La Nina is often associated with:
(A) The complete failure of the Northeast monsoon.
(B) Severe heatwaves during the peak of summer across the entire country.
(C) A delayed onset of the Southwest monsoon.
(D) Extreme and devastating floods in parts of India.

117. In the context of India's seasonal variation, the period of "retreating monsoon" is typically marked by:
(A) Persistent cloud cover and continuous rainfall across the entire region.
(B) Continuous extremely hot days and hot nights throughout the country.
(C) Severe dust storms originating from the regions of the Thar desert.
(D) Clear skies and lower humidity followed by dropping temperatures.

118. Match List-I (Geographical Feature) with List-II (Climatic Impact on India) by selecting the correct combination from the options provided:
List I: (Geographical Feature)
P. Himalayas
Q. Western Ghats
R. Aravalli Range
S. Tibetan Plateau
List II: (Climatic Impact on India)
1. Intensive summer heating driving the monsoon
2. Blocks cold Central Asian winds
3. Fails to obstruct the Arabian Sea branch, leaving Rajasthan dry
4. Causes heavy orographic rain on the Malabar coast
(A) P-2, Q-4, R-3, S-1
(B) P-1, Q-3, R-4, S-2
(C) P-2, Q-1, R-3, S-4
(D) P-2, Q-4, R-3, S-1

119. The phenomenon where the monsoon rains fail for two or more weeks during the core monsoon months is termed as:
(A) Break in the monsoon
(B) Monsoon onset
(C) Monsoon withdrawal
(D) Monsoon burst

120. Which state benefits the most from the winter rainfall brought by Western Disturbances for its wheat cultivation?
(A) Punjab
(B) Tamil Nadu
(C) Kerala
(D) Odisha

121. Heavy snowfall in the Himalayan states during winter has which of the following indirect benefits?
(A) Ensures steady meltwater to perennial rivers in summer.
(B) Permanent lowering of the global sea level after the winter season ends.
(C) Total prevention of the occurrence of the El Nino oscillation phenomenon.
(D) Complete stopping of all landslides during the following monsoon season.

122. Which of the following accurately describes the climate of the Malwa Plateau in Madhya Pradesh?
(A) Extreme summers followed by extreme winter conditions.
(B) Heavy rainfall patterns occurring throughout the year.
(C) Arid, desert-like climate with very little vegetation.
(D) Moderate summers and moderate winters.

123. What happens when the Arabian Sea branch and the Bay of Bengal branch of the Southwest monsoon merge?
(A) Cause a complete dry spell over central Indian regions.
(B) Trigger the immediate withdrawal of the monsoon season.
(C) Generate heavy rainfall in NW Ganga plains.
(D) Flow backward toward the equatorial low-pressure belt.

124. If the Himalayas were completely deforested, which aspect of the local climate would be most directly and immediately exacerbated?
(A) The overall severity of the El Nino oscillation effect.
(B) More localized flash floods and reduced

Click Here to Buy book on Amazon

infiltration during monsoons.
(C) The strengthening of the Tropical Easterly Jet in the atmosphere.
(D) The reversal of the ocean current patterns in the Bay of Bengal.

125. Match List-I (Region in Madhya Pradesh) with List-II (Rainfall Characteristic) by selecting the correct combination from the options provided:
List I: (Region in Madhya Pradesh)
P. Pachmarhi
Q. Bhind/Morena
R. Eastern MP (Mandla/Balaghat)
S. Western MP (Malwa)
List II: (Rainfall Characteristic)
1. Highest rainfall (above 150 cm)
2. Very low rainfall (below 75 cm)
3. High rainfall (120-150 cm)
4. Moderate rainfall (75-100 cm)
(A) P-2, Q-1, R-4, S-3
(B) P-1, Q-3, R-2, S-4
(C) P-1, Q-2, R-3, S-4
(D) P-3, Q-2, R-1, S-4

126. In the context of orographic rainfall, the side of the mountain that faces away from the wind and receives relatively less rain is called the:
(A) Leeward side
(B) Windward side
(C) Crest
(D) Foothill

127. High humidity combined with high temperature during the months of September and October makes the weather very oppressive. This phenomenon is commonly known as:
(A) Mango shower
(B) October Heat
(C) Monsoon burst
(D) Break monsoon

128. The variability of the onset dates of the Indian monsoon over a long-term period indicates that:
(A) The monsoon always arrives exactly on June 1st in all regions.
(B) The monsoon onset has been permanently delayed to late July.
(C) Onset dates of the monsoon have lost all scientific predictability.
(D) Onset can fluctuate by days to weeks from the normal date.

129. The highest temperature in Madhya Pradesh is typically recorded during the summer month of May in which of the following regions?
(A) Pachmarhi
(B) Ganjbasoda (Vidisha) or Khajuraho
(C) Amarkantak
(D) Mandu

130. A highly variable monsoon significantly impacts the Indian economy because:
(A) Large portion of Indian agriculture relies on rainfed irrigation.
(B) India relies on the large-scale export of its monsoon winds.
(C) Monsoon dictates the performance of the high-tech IT sector.
(D) Monsoons increase the extraction of mineral oil from the ground.

www.nodia.in

NODIA

ANSWERS

1. (D) Sudden transition from hot dry weather to widespread rains over Kerala.
The arrival of the southwest monsoon is marked by a dramatic shift in weather conditions along the southwestern coast. This event involves a sudden surge in moisture-laden winds from the Indian Ocean, resulting in heavy, persistent rainfall and a significant drop in temperature. It represents the transition from the scorching summer heat to the rainy season across the country.

2. (C) Northeast monsoon
During the winter months, the retreat of the southwest monsoon leads to the establishment of the northeast monsoon. These winds blow from the land toward the Bay of Bengal, picking up moisture before hitting the southeastern coast of India. Consequently, Tamil Nadu receives its primary rainfall during this period, which is crucial for regional agriculture and water resource management.

3. (C) Tropic of Cancer
The Tropic of Cancer is a significant latitudinal line that traverses the central part of the Indian landmass. It effectively bisects the country into two distinct climatic zones: the tropical zone to the south and the subtropical zone to the north. This geographical positioning influences temperature gradients, solar radiation intensity, and seasonal variations experienced across the various Indian states.

4. (A) Both A and R are true and R is the correct explanation of A.
El Nino events involve abnormal warming of the eastern Pacific Ocean, which disrupts the global atmospheric circulation known as the Walker Circulation. This disruption leads to the development of high-pressure systems and sinking air over the Indian Ocean. Such conditions suppress convection and moisture availability, often resulting in deficient rainfall and drought-like situations across the entire Indian subcontinent.

5. (B) It represents a zone of high atmospheric pressure.
The Inter Tropical Convergence Zone is a region where trade winds from both hemispheres meet, creating a significant low-pressure belt. During the Indian summer, this zone shifts northward over the Ganga plains, becoming the monsoon trough. It facilitates the influx of moisture-laden winds. Describing it as a high-pressure zone is scientifically inaccurate in a meteorological and climatic context.

6. (B) Upwelling of cold, nutrient-rich water intensifies off the South American coast.
La Nina is characterized by the strengthening of trade winds across the Pacific Ocean. These intensified winds push warm surface waters toward Asia, allowing colder, nutrient-rich waters to rise from the deep ocean off the coast of South America. This enhanced upwelling supports marine ecosystems and signifies the cooling phase of the broader El Nino-Southern Oscillation climatic cycle.

7. (B) Proximity to the sea
Coastal regions in India experience an equable climate due to the thermal properties of large water bodies. Oceans heat up and cool down much slower than land. This differential heating creates sea and land breezes that regulate temperatures throughout the year. As a result, coastal cities maintain moderate temperature ranges compared to the extreme variations seen in the interior.

8. (B) 1st June
The formal arrival of the southwest monsoon in India is traditionally marked by its onset over the Kerala coast. Meteorological records indicate that this event typically occurs around the beginning of June. This date serves as a critical benchmark for agricultural planning and water management, signaling the start of the four-month-long rainy season across the Indian landmass.

Downloaded from www.pdf.tube

9. (B) The abnormal warming of surface waters in the eastern tropical Pacific.
El Nino is a complex climatic event involving the periodic warming of sea surface temperatures in the central and eastern equatorial Pacific Ocean. This warming disrupts normal wind patterns and ocean currents, affecting global weather. In India, it is frequently linked to weaker monsoon winds and reduced rainfall, impacting agricultural productivity and the overall water resource management systems.

10. (C) Low-pressure trough in equatorial latitudes where trade winds converge.
The Inter Tropical Convergence Zone is a belt of low pressure encircling Earth near the equator. It is formed by the convergence of the northeast and southeast trade winds. This convergence forces air to rise, leading to cloud formation and heavy precipitation. Its seasonal migration is a fundamental driver of the monsoon systems in various tropical and subtropical regions.

11. (D) El Nino-Southern Oscillation
ENSO refers to a recurring climate pattern involving changes in the temperature of waters in the central and eastern tropical Pacific Ocean. It consists of two main phases: El Nino, the warming phase, and La Nina, the cooling phase. This coupled ocean-atmosphere phenomenon significantly influences global weather patterns, including the intensity and distribution of the seasonal Indian monsoon.

12. (C) Seasonal reversal of wind direction
The term monsoon originates from the Arabic word meaning season. It specifically refers to the large-scale, seasonal shifts in wind patterns that occur over the Indian subcontinent and surrounding oceans. During summer, winds blow from the sea to the land, while in winter, they reverse direction, blowing from the land toward the sea, significantly affecting temperature and rainfall.

13. (A) North-Western states
The retreat or withdrawal of the southwest monsoon is a gradual process that typically commences in the northwestern parts of India, such as Rajasthan. This happens as the heat low over the region weakens and the pressure belts shift southward. By early September, the moisture-laden winds begin to recede, marking the transition toward the cooler winter season.

14. (C) A narrow band of strong winds blowing in the upper troposphere.
Jet streams are high-altitude, fast-moving air currents found in the upper layers of the troposphere. They generally flow from west to east and play a vital role in steering weather systems. In India, the subtropical westerly jet and the tropical easterly jet are crucial factors that influence the timing, onset, and intensity of the seasonal monsoon rains.

15. (D) Above-normal and often flood-inducing monsoon rainfall in India.
La Nina represents the cold phase of the ENSO cycle and generally has a favorable impact on the Indian monsoon. It strengthens the trade winds and enhances moisture convergence over the subcontinent. This often leads to bountiful rainfall, which can sometimes exceed normal levels, resulting in widespread flooding across different states, while benefiting agricultural production in most regions.

16. (A) Normal lapse rate
Within the troposphere, the temperature typically decreases as altitude increases. This phenomenon is known as the normal lapse rate, averaging a drop of approximately 6.5 degrees Celsius for every kilometer of ascent. This principle explains why mountain regions and hill stations in India remain significantly cooler than the surrounding low-lying plains even during the peak of the summer months.

17. (A) Peru and Ecuador
El Nino involves the development of unusually warm surface waters along the equatorial Pacific, specifically off the western coasts of South American countries like Peru and Ecuador. This warming replaces the cold Peruvian current that usually flows in the region. These changes in oceanic temperature trigger a chain reaction in atmospheric circulation, affecting weather systems on a global scale.

18. (A) Formation of a strong low-pressure zone attracting southwest monsoon winds.
During summer, the high-altitude Tibetan Plateau absorbs significant solar radiation, becoming

NODIA

intensely heated. This causes the air above it to rise, creating a powerful thermal low-pressure system. This system acts as a pump, drawing moisture-rich air from the Indian Ocean toward the subcontinent. This mechanism is a primary driver for the strengthening and stabilization of the southwest monsoon.

19. (A) Kerala Coast, Mumbai, New Delhi, Punjab
The southwest monsoon progresses across India in a fairly predictable geographic sequence. It typically arrives first at the Kerala coast around June 1st. It then travels northward along the western coast, reaching Mumbai by mid-June. Subsequently, it moves into the interior plains, hitting New Delhi by late June and finally reaching the northwestern state of Punjab.

20. (A) I and III only
During the summer months, the subtropical westerly jet stream shifts northward, moving beyond the Himalayan range. Simultaneously, the tropical easterly jet stream develops over the Indian peninsula. This easterly jet is essential as it helps drive the southwest monsoon winds toward the landmass. However, the tropical easterly jet is a summer phenomenon, not a winter one over India.

21. (C) Tahiti and Darwin
The Southern Oscillation Index is a standardized measure used to monitor the atmospheric component of the ENSO cycle. It is calculated based on the difference in surface air pressure between Tahiti in the central Pacific and Darwin in northern Australia. Sustained negative values often indicate El Nino conditions, while positive values are typically associated with the La Nina phase.

22. (B) The differential heating and cooling of land and water
Edmund Halley proposed that monsoons are essentially large-scale land and sea breezes. His classical thermal theory suggests that during summer, the Indian landmass heats up much faster than the surrounding oceans, creating a low-pressure area. This pressure gradient forces moisture-laden winds to blow from the cooler sea toward the warmer land, resulting in the seasonal monsoon rains.

23. (A) I only
During the northern hemisphere summer, the Inter Tropical Convergence Zone shifts northward and positions itself over the Ganga plains, where it is known as the monsoon trough. This shift attracts the trade winds from the southern hemisphere across the equator. However, it is the northward shift, not a southward shift, that facilitates the onset of the southwest monsoon rains.

24. (D) It leads to an increase in severe flood frequency across central India.
El Nino is generally associated with a wedding of the monsoon circulation over the Indian subcontinent. It often causes a delay in the onset of rains and results in significantly deficient precipitation. While it can lead to droughts and heatwaves, it is rarely associated with increased flood frequency in central India; instead, it typically reduces the overall seasonal rainfall.

25. (B) Bay of Bengal branch - Causes heavy rainfall in the Western Ghats.
The southwest monsoon splits into two main branches upon reaching the Indian peninsula. The Arabian Sea branch is directly responsible for the heavy orographic rainfall experienced on the windward side of the Western Ghats. The Bay of Bengal branch moves toward the northeast and the Ganga plains. Attributing Western Ghats rainfall to the Bay of Bengal branch is geographically incorrect.

26. (D) Longitude
Several geographical factors control India's climate, including latitude, altitude, distance from the sea, and the distribution of land and water. These factors influence temperature, pressure, and wind patterns. However, longitude primarily determines time zones and does not directly affect climatic characteristics or weather patterns in the same way that latitudinal position or physical relief features do for a region.

27. (A) Unusually cold ocean temperatures in the Equatorial Pacific.
La Nina is defined by the periodic cooling of sea surface temperatures across the central and east-central equatorial Pacific. It represents the opposite phase of El Nino. During La Nina, the trade winds become even stronger than usual,

Click Here to Buy book on Amazon

pushing warm water further west. This leads to increased upwelling of cold water in the eastern Pacific, often enhancing monsoon rainfall.

28. (A) P-2, Q-3, R-1, S-4
Different regions in India experience unique pre-monsoon weather phenomena. Mango showers are common in Kerala, aiding the ripening of fruit. Blossom showers occur in Karnataka, benefiting coffee plantations. Kalbaisakhi refers to violent thunderstorms in West Bengal during the spring. The Loo is a hot, dry summer wind that blows across the northern plains, causing intense and oppressive heat.

29. (C) Northeast monsoon winds travel from land to sea, making them mostly dry.
The southwest monsoon blows from the sea toward the land, carrying immense moisture and providing the bulk of India's annual rainfall. In contrast, the northeast monsoon winds blow from the land toward the sea during winter. Because they originate over land, they are generally dry, except when they cross the Bay of Bengal and bring rain to Tamil Nadu.

30. (D) It triggers the onset of the Southwest monsoon.
In winter, the subtropical westerly jet stream flows south of the Himalayas over the Indian plains. As summer progresses, this jet stream migrates northward, eventually moving beyond the Himalayan range. This northward withdrawal is a crucial atmospheric event that allows the low-pressure system to establish itself over northern India, effectively triggering the sudden onset or "burst" of the monsoon.

31. (C) Subtropical Westerly Jet
Western Disturbances are extratropical storms that originate in the Mediterranean region. They travel eastward across West and South Asia. Their movement toward the Indian subcontinent is facilitated by the subtropical westerly jet stream, which flows in the upper atmosphere. These disturbances bring essential winter rainfall to the northwestern parts of India, which is vital for the cultivation of Rabi crops.

32. (B) Hot and dry
The Loo is a powerful, oppressive summer wind characteristic of the Indo-Gangetic Plain in northern India and Pakistan. It typically blows during the months of May and June. These winds are extremely hot and dry, often reaching temperatures between 45 and 50 degrees Celsius. Exposure to the Loo can lead to fatal heatstrokes and severe dehydration.

33. (B) Warmer sea surface temperatures in the western Indian Ocean relative to the east.
The Indian Ocean Dipole is an ocean-atmosphere phenomenon in the Indian Ocean. A positive phase is characterized by unusually warm sea surface temperatures in the western Indian Ocean and cooler temperatures in the eastern Indian Ocean near Indonesia. This phase often enhances the Indian monsoon by increasing moisture availability and convection, sometimes counteracting the negative effects of El Nino.

34. (D) Tropical monsoon climate with a short dry winter season.
In Koppen's climatic classification system, the code Amw denotes a tropical monsoon climate. This type is characterized by heavy seasonal rainfall during the monsoon months and a very short dry season, usually occurring in winter. In India, this climate is most prominently found along the western coastal strip, including the Malabar coast and the windward slopes of the Western Ghats.

35. (A) Low-pressure area running parallel to the Himalayas during monsoon.
The monsoon trough is an elongated zone of low atmospheric pressure that forms over northern India during the summer monsoon season. It generally lies parallel to the Himalayan foothills. The position of this trough fluctuates throughout the season; its movement determines the spatial distribution of rainfall. When it stays over the plains, it brings widespread rain to northern India.

36. (A) Semi-arid steppe climate in NW India and leeward Western Ghats.
The BShw classification in Koppen's system refers to a low-latitude semi-arid or steppe climate. In the Indian context, this climate is found in regions that receive limited rainfall, such as parts of Rajasthan, Haryana, and Gujarat. It also characterizes the rain-shadow areas located on

NODIA

the leeward side of the Western Ghats, where moisture from the monsoon winds is depleted.

37. (A) I only
The Walker Circulation is a vast longitudinal atmospheric circulation across the tropical Pacific Ocean, driven by temperature differences between the east and west. In a normal year, it features rising air in the west and sinking air in the east. During El Nino, this circulation actually weakens or even reverses as the warm water shifts eastward, disrupting global weather.

38. (D) Mango showers - Aid early ripening of mangoes in Kerala and Karnataka.
Pre-monsoon showers occur toward the end of the summer season in various parts of India. In the southern states of Kerala and Karnataka, these rains are locally known as mango showers because they are highly beneficial for the early ripening of the mango crop. Other local names like Kalbaisakhi and Norwesters refer to different types of thunderstorms found elsewhere.

39. (D) Coromandel coast receives maximum rainfall during summer monsoon.
Most of India receives the bulk of its annual precipitation from the southwest monsoon during the summer months. However, the Coromandel coast of Tamil Nadu is an exception. It remains relatively dry during the summer because it lies in the rain-shadow area. Instead, this region receives its maximum rainfall during the winter months from the retreating or northeast monsoon winds.

40. (D) A brief spell of warmer weather followed by a severe cold wave.
The approach of a Western Disturbance in winter usually causes a temporary rise in nighttime temperatures due to cloud cover. After the disturbance passes and the skies clear, cold winds from the northern latitudes rush in, leading to a significant drop in temperature. This results in severe cold wave conditions and occasionally ground frost across the plains of northern India.

41. (B) Lies in the rain-shadow area on the leeward Western Ghats.
Mumbai is located on the windward side of the Western Ghats and receives heavy orographic rainfall as the moisture-laden Arabian Sea branch of the monsoon is forced to rise. Pune, although nearby, is situated on the eastern or leeward side of the mountains. By the time the winds reach Pune, they have lost most of their moisture, creating a rain-shadow effect.

42. (C) II and IV
The Indian Ocean Dipole is a coupled ocean-atmosphere phenomenon that occurs specifically in the Indian Ocean, not the Pacific. Furthermore, it does not operate entirely independently of ENSO; the two phenomena can occur simultaneously and interact with each other. A positive IOD can often help mitigate the rainfall deficit typically caused by an El Nino event during the Indian monsoon.

43. (B) West Bengal
Kalbaisakhi refers to the localized, violent thunderstorms that occur in the spring, particularly during the month of Baisakh, in the eastern parts of India. These storms are most prominent in West Bengal and are characterized by heavy rain, lightning, and strong winds. While they can be destructive, they also provide much-needed relief from the intense summer heat before the monsoon.

44. (D) Shifting of the monsoon trough closer to the Himalayan foothills.
A "break" in the monsoon occurs when the monsoon trough moves from its normal position over the northern plains toward the Himalayan foothills. This shift results in a cessation of rainfall over the plains and central India for several days or weeks. Conversely, this movement leads to heavy precipitation and potential flooding in the mountainous regions and parts of northeast India.

45. (C) Aw and Cwg
Madhya Pradesh exhibits two primary climate types under the Koppen system. The southern and western regions, such as the Malwa Plateau, are categorized as Aw, representing a tropical savanna climate with distinct dry winters. The northern parts of the state, including regions near the Ganga plains, fall under Cwg, which is a humid subtropical climate with dry winters and hot summers.

NODIA

46. (B) It is detrimental to the Southwest monsoon, often causing deficit rainfall.
A negative Indian Ocean Dipole occurs when the eastern Indian Ocean becomes unusually warm while the western part remains cooler. This temperature gradient suppresses the moisture supply toward the Indian landmass and weakens the monsoon circulation. Consequently, a negative IOD phase is typically associated with below-average rainfall in India, potentially leading to drought conditions during the southwest monsoon season.

47. (B) Western Rajasthan
While the Meghalaya Plateau and the western slopes of the Western Ghats are among the wettest regions in the world, western Rajasthan is a notable exception. It receives very little rainfall, often less than 25 cm annually. This aridity is due to the Aravalli Range lying parallel to the monsoon winds and the region's location far from the primary moisture sources.

48. (B) Rabi crops
Mahawat is the local term for the winter rainfall received in northwestern India, caused by the arrival of Western Disturbances. Although the amount of rainfall is relatively small, it is extremely beneficial for the growth of Rabi crops, particularly wheat. This moisture helps in the maturation of the crops during the dry winter months, ensuring a better harvest for regional farmers.

49. (A) I, II, III, IV
The withdrawal of the southwest monsoon follows a general north-to-south trajectory. It begins in the northwestern plains (Rajasthan and Punjab) in early September. It then gradually recedes from central India (Madhya Pradesh) by late September, followed by the Deccan Plateau in October. Finally, the monsoon completely withdraws from the southern peninsula by early December as the winter circulation establishes.

50. (C) Both I and II
During a monsoon break, the monsoon trough shifts toward the Himalayas, causing intense rainfall in the foothills and northeast India. Simultaneously, the rest of the country, including the western coast and the central plains, experiences a dry spell with little to no rain. This period is characterized by a significant redistribution of precipitation across different geographical regions of the subcontinent.

51. (D) Orographic rainfall
The Western Ghats act as a massive physical barrier to the moisture-laden southwest monsoon winds blowing from the Arabian Sea. As these winds are forced to rise over the mountains, the air cools and condenses, leading to heavy precipitation on the windward slopes. This type of rainfall, caused by the relief or topography of the land, is known as orographic rainfall.

52. (D) Mediterranean Sea
Western Disturbances are low-pressure systems that originate over the Mediterranean Sea. They are carried eastward by the high-altitude westerly jet streams. As they travel across Iraq, Iran, and Afghanistan, they pick up additional moisture from the Caspian Sea before reaching the northwestern parts of India. These systems are the primary source of winter precipitation in the northern plains and mountains.

53. (C) Jute
Western Disturbances bring vital winter rain to northern India, supporting Rabi crops such as wheat, mustard, and gram. These crops thrive in the cool, moist conditions provided by these storms. Jute, however, is a Kharif crop that requires high temperatures and heavy rainfall during the summer months. It is primarily grown in the eastern states and is not associated with winter rain.

54. (C) The diurnal range of temperature is extremely high in the Thar Desert.
In desert environments like the Thar Desert, the absence of cloud cover and low humidity allow for rapid heating during the day and rapid cooling at night. This results in a very high diurnal range of temperature, where the difference between the maximum and minimum temperature in a single day is extreme. In contrast, coastal areas have a smaller range.

55. (A) Coffee
Blossom showers are pre-monsoon rains that occur in the southern states of India, especially Kerala and Karnataka, during March and April. These showers are critically important for the

Downloaded from www.pdf.tube

coffee industry as they trigger the flowering of coffee plants. Without these timely rains, the coffee yield can be significantly reduced, making them a vital meteorological event for local plantation farmers in the region.

56. (A) Positive IOD - Enhanced monsoon rainfall
A positive Indian Ocean Dipole involves warmer than average sea surface temperatures in the western Indian Ocean. This condition enhances atmospheric convection and increases the moisture supply to the Indian subcontinent during the monsoon season. Consequently, a positive IOD is generally associated with stronger monsoon winds and above-average rainfall, which can sometimes even compensate for the drying effects of El Nino.

57. (A) As
Under the Koppen climatic classification, the Coromandel coast of Tamil Nadu is designated as "As". This code represents a tropical climate with a dry summer season. Unlike most parts of India that receive rain in summer, this region stays dry during the southwest monsoon and receives the majority of its annual precipitation from the northeast monsoon during the winter months.

58. (A) P-3, Q-1, R-4, S-2
Koppen's classification maps different Indian regions based on temperature and rainfall. Amw represents the tropical monsoon climate of the Malabar Coast. As corresponds to the tropical climate with dry summers on the Coromandel Coast. BShw describes the semi-arid steppe regions in northwestern India. Cwg represents the humid subtropical climate found across the Ganga Plain and northern parts of Madhya Pradesh.

59. (C) Northwestern India and the Thar Desert.
During the peak of the Indian summer (April to June), the vertical rays of the sun move toward the Tropic of Cancer. Northwestern India, including the Thar Desert and parts of Rajasthan and Gujarat, records the highest temperatures in the country. This intense heating is due to the region's continental location, lack of moisture, and the absence of any moderating oceanic influence.

NODIA

60. (B) Dry weather with a rise in daytime temperatures
When a "break" in the monsoon occurs, the rainfall activity ceases over central India, including states like Madhya Pradesh. This happens because the monsoon trough shifts northward toward the Himalayas. During this period, the skies often clear up, leading to a significant increase in solar radiation and a subsequent rise in daytime temperatures, creating hot and uncomfortable weather conditions for residents.

61. (C) Temperature increasing with increasing altitude in lower atmosphere.
Under normal conditions, temperature decreases with height in the troposphere. However, on clear, calm winter nights in northern India, the ground loses heat rapidly through radiation. The air in contact with the cold surface becomes cooler than the air above it. This phenomenon, where warmer air sits on top of colder air, is known as a temperature inversion and often leads to fog.

62. (A) Converging winds and ascending air
The Inter Tropical Convergence Zone is a meteorological belt near the equator where the northeast and southeast trade winds meet. As these wind systems converge, the air is forced to rise into the atmosphere. This upward movement leads to cooling, condensation, and the formation of clouds and heavy precipitation, making the ITCZ a region of significant weather activity and low pressure.

63. (A) It experiences a continental climate due to its landlocked nature.
Madhya Pradesh is located in the heart of India, far from the moderating influence of any ocean. This landlocked position results in a continental climate, characterized by a large range of temperatures. Summers are generally very hot, while winters can be quite cold. The state does not benefit from the equable temperatures typically found in coastal regions, leading to extreme seasonal variations.

64. (C) I and II only
In Madhya Pradesh, the northern districts like Gwalior and Bhind follow the Cwg climate (humid subtropical with dry winters). The southern and western parts, including the Malwa and Nimar regions, fall under the Aw climate

(tropical savanna). However, the BShw (semi-arid steppe) climate is generally found in parts of western India and the rain-shadow areas, not across the entire eastern boundary.

65. (A) North India would face severe winter cold, like a cold desert.
The Himalayan range acts as a vital climatic buffer for the Indian subcontinent. It blocks the cold, dry winds originating from Central Asia and Siberia from entering the country during winter. If these mountains were absent, these frigid air masses would sweep across northern India, causing temperatures to plummet and transforming the region into a cold, arid desert similar to the Tibetan Plateau.

66. (A) Bringing extratropical Western Disturbances into NW India.
During the winter season, the subtropical westerly jet stream flows over northern India. This high-altitude wind current acts as a highway for extratropical cyclones known as Western Disturbances. By steering these systems from the Mediterranean region toward the Indian landmass, the jet stream ensures that northwestern India receives essential winter precipitation, which is critical for agricultural productivity and replenishing water resources.

67. (C) Both I and II
The Bay of Bengal branch of the southwest monsoon is diverted toward the Indian subcontinent by the Arakan Yoma mountains in Myanmar. This branch carries significant moisture and hits the northeastern states first, causing exceptionally heavy rainfall. It then turns westward, moving along the Ganga valley toward the northwestern parts of the country, providing rain to the vast northern plains of India.

68. (B) 6.5 degrees Celsius
The environmental lapse rate describes the rate at which the atmospheric temperature decreases with an increase in altitude. On average, for every 1000 meters (or 1 kilometer) of ascent in the troposphere, the temperature drops by approximately 6.5 degrees Celsius. This is a fundamental principle in climatology that explains why higher elevations, such as the Himalayas or Peninsular hill stations, are much cooler.

69. (A) Hermann Flohn
While Edmund Halley proposed the thermal concept of monsoons, Hermann Flohn was a prominent advocate of the dynamic theory. This theory suggests that monsoons are not just caused by temperature differences but are primarily a result of the seasonal migration of global pressure belts and the Inter Tropical Convergence Zone. This perspective provides a more comprehensive understanding of the atmospheric movements involved.

70. (C) Areas of low rainfall exhibit high variability in the monsoon.
In India, there is an inverse relationship between the total amount of rainfall a region receives and its rainfall variability. Areas that receive heavy rainfall, like the Northeast, have low variability and more reliable monsoons. Conversely, arid and semi-arid regions with low annual rainfall, such as Rajasthan and parts of Gujarat, experience very high variability, making them prone to frequent droughts.

71. (A) Chennai
Chennai and other coastal districts of Tamil Nadu receive the vast majority of their annual rainfall from the northeast monsoon between October and December. During this period, the winds pick up moisture as they cross the Bay of Bengal and hit the eastern coast. This makes the northeast monsoon the primary rainy season for these regions, in contrast to the rest of India.

72. (A) I, II, III, IV and V
All these statements correctly describe the climatic features of Madhya Pradesh. The Tropic of Cancer influences its heat patterns, and rainfall generally decreases from east to west. Being centrally located, it receives moisture from both monsoon branches. Northern districts face extreme temperature fluctuations, while the Malwa Plateau is known for its relatively moderate and pleasant climate throughout the year.

73. (D) High-pressure center over NW India and central Asia.
During winter, the northern hemisphere cools down, leading to the development of a strong high-pressure center over Central Asia and northwestern India. At the same time, the Indian

Click Here to Buy book on Amazon

Ocean remains relatively warmer, creating a low-pressure area. This pressure gradient causes winds to blow from the high-pressure landmass toward the low-pressure sea, resulting in the dry, offshore winds of the winter monsoon.

74. (C) Disrupts Kharif sowing, potentially reducing agricultural output.
The Indian agricultural cycle is heavily dependent on the timely arrival of the southwest monsoon. Most Kharif crops, such as rice and maize, are sown with the first rains in June. A significant delay in the onset of the monsoon disrupts this sowing schedule, leading to a shorter growing season, poor crop establishment, and a potential reduction in the overall agricultural yield.

75. (D) The intense heating of the Tibetan Plateau.
The tropical easterly jet stream is a summer phenomenon over the Indian subcontinent. It is primarily driven by the intense heating of the high-altitude Tibetan Plateau. This heating causes air to rise and move toward the equator in the upper atmosphere. The Coriolis force then deflects these winds, creating a strong easterly jet that plays a crucial role in the monsoon circulation.

76. (D) Arabian Sea branch feeds from more water and hits the landmass fully.
The Arabian Sea branch is generally considered stronger than the Bay of Bengal branch for several reasons. It covers a larger oceanic area, allowing it to pick up more moisture. Additionally, this branch hits the Indian landmass more directly and is immediately intercepted by the high Western Ghats, which forces the air to rise and release heavy precipitation along the coast.

77. (D) Sudden onset of the Tropical Easterly Jet
The "burst" of the monsoon refers to the sudden and dramatic increase in rainfall and wind speed that marks its arrival. This event is closely linked to upper atmospheric changes, specifically the sudden appearance of the tropical easterly jet stream over the southern peninsula. This jet stream helps in the rapid inland movement of the moisture-laden winds, triggering the start of the season.

78. (B) It is generally lower in altitude primarily due to much higher levels of precipitation.
The altitude of the permanent snowline is influenced by both temperature and precipitation. Although the Eastern Himalayas are at a lower latitude, they receive significantly more rainfall and snowfall from the Bay of Bengal branch of the monsoon. This increased moisture allows snow to accumulate and persist at lower elevations compared to the drier and more continental Western Himalayan ranges.

79. (A) Cherrapunji, Kolkata, Allahabad, Delhi
Rainfall in the northern plains of India generally decreases from east to west. Cherrapunji in the northeast receives exceptionally high rainfall due to its geography. Moving westward along the Ganga valley, Kolkata receives more rain than Allahabad, which in turn receives more than New Delhi. This trend is caused by the gradual depletion of moisture in the monsoon winds as they travel inland.

80. (D) Causes land to heat and cool faster, driving wind reversal.
Land has a lower specific heat capacity than water, meaning it heats up and cools down much more quickly. This physical difference creates seasonal pressure gradients between the Indian landmass and the surrounding oceans. In summer, the land becomes a low-pressure zone, attracting sea winds, while in winter, it becomes a high-pressure zone, pushing winds toward the sea, creating the monsoon cycle.

NODIA

81. (C) It lies parallel to the Arabian Sea branch of the monsoon.
The Aravalli Range in Rajasthan does not act as an effective barrier to the southwest monsoon winds. This is because the mountains are oriented parallel to the direction of the moisture-laden winds blowing from the Arabian Sea. As a result, the winds pass by the range without being forced to rise significantly, preventing the occurrence of heavy orographic rainfall in the region.

82. (A) Proximity to the sea
The climate of Madhya Pradesh is shaped by its central, landlocked location, its varied topography including the Vindhyan and Satpura ranges, and the passage of the Tropic of Cancer. However, proximity to the sea is not a factor because the

state is located deep within the interior of the subcontinent, far from any coastline, resulting in a continental climate with extreme temperatures.

83. (D) Blocks cold, dry Central Asian winds from the subcontinent.
During the winter months, the vast Himalayan mountain system serves as a massive wall that prevents the frigid, dry air masses from Central Asia and Siberia from flowing into the Indian subcontinent. This protective barrier ensures that northern India remains significantly warmer than other regions at similar latitudes, preserving the relatively mild winter conditions experienced across the northern and central plains.

84. (C) Around 20°N to 25°N latitude.
During the peak of the northern summer in July, the Inter Tropical Convergence Zone (ITCZ) migrates significantly northward from its equatorial position. Over the Indian subcontinent, it is typically located between 20°N and 25°N latitude, lying over the Indo-Gangetic plains. This position, often referred to as the monsoon trough, is responsible for attracting the moisture-laden southwest monsoon winds into India.

85. (C) Odisha
The Tropic of Cancer passes through eight Indian states: Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Tripura, and Mizoram. It does not pass through Odisha, which is located to the south of this latitudinal line. Knowing the states through which this line passes is important for understanding the distribution of solar radiation and climatic zones within the Indian subcontinent.

86. (B) Pachmarhi
Pachmarhi, a prominent hill station located in the Mahadeo Hills of the Satpura Range, receives the highest annual rainfall in Madhya Pradesh. It typically records over 200 cm of rain. Its high altitude and position allow it to intercept moisture-laden winds from both the Arabian Sea and the Bay of Bengal branches of the monsoon, leading to heavy orographic precipitation.

87. (B) Active monsoon conditions with widespread regional rainfall.
The position of the monsoon trough is the primary determinant of rainfall distribution during the season. When the trough shifts southward and stays over central India, it creates unstable atmospheric conditions that lead to active monsoon weather. This results in widespread and heavy rainfall across states like Madhya Pradesh and Maharashtra, which is highly beneficial for regional agriculture and reservoirs.

88. (B) P-3, Q-1, R-4, S-2
A break in the monsoon is caused by the trough shifting to the Himalayan foothills. Winter rain in the northwest is due to Western Disturbances. The burst of the monsoon involves the sudden arrival of moist maritime air. Winter rainfall in Tamil Nadu is caused by the northeast trade winds picking up moisture from the Bay of Bengal before hitting the coast.

89. (B) Continental
Regions located deep within the interior of the Indian subcontinent, such as Delhi, Nagpur, or Bhopal, experience a continental climate. This type of climate is characterized by extreme temperature variations between seasons, with very hot summers and cold winters. This occurs because these areas are far from the moderating influence of the sea, which otherwise keeps temperatures stable throughout the year.

90. (A) Early withdrawal - Moisture stress for late-maturing Kharif crops.
The timing of the monsoon withdrawal is critical for agriculture. If the monsoon recedes earlier than normal, late-maturing Kharif crops like certain varieties of rice or pulses may face severe moisture stress during their final growth stages. This can lead to reduced grain filling and lower yields, highlighting the vulnerability of rainfed farming to fluctuations in the monsoon's overall duration.

91. (B) Equatorial Pacific surface temperatures near long-term average.
In the ENSO cycle, neutral conditions occur when the sea surface temperatures in the equatorial Pacific Ocean are close to their long-term average. During this phase, neither El Nino nor La Nina is present. The atmospheric circulation

Downloaded from www.pdf.tube

and rainfall patterns across the Pacific and other parts of the world generally follow their typical seasonal norms without the disruptions caused by extreme temperature anomalies.

92. (C) A sharp decrease in rainfall
When the monsoon trough moves from the northern plains toward the Himalayan foothills, it causes a "break" in the monsoon over the plains. During this period, the rainfall activity significantly decreases or stops entirely over the vast Indo-Gangetic plains and central India. This results in dry weather and a rise in temperature for these regions, while the mountains receive heavy rain.

93. (C) Strengthen considerably
La Nina is characterized by an intensification of the normal atmospheric circulation over the Pacific. During this phase, the easterly trade winds become much stronger than usual. These powerful winds push even more warm surface water toward the western Pacific, which in turn leads to increased upwelling of cold water along the South American coast, influencing global weather patterns significantly.

94. (C) I, II, III, IV, and V
All the provided statements regarding Western Disturbances are correct. They are extratropical cyclones that originate in the Mediterranean region. They travel eastward across West Asia, steered by the subtropical westerly jet stream. Upon reaching India, they provide essential winter moisture for Rabi crops like wheat, making them a vital component of the northern Indian agricultural and climatic cycle during winter.

95. (B) Enhanced convection and increased rainfall over the western Indian Ocean.
During a Positive Indian Ocean Dipole phase, the sea surface temperatures in the western Indian Ocean are unusually warm. This warming leads to increased evaporation and enhanced atmospheric convection in that region. Consequently, it results in higher rainfall over the western Indian Ocean and often leads to above-normal monsoon precipitation over the Indian subcontinent, potentially counteracting the effects of El Nino.

96. (B) Differential heating and cooling of landmass and ocean.
The fundamental cause of the monsoon is the difference in how land and water respond to solar heating. During summer, the landmass heats up more quickly than the ocean, creating a low-pressure area that draws in moist sea winds. In winter, the land cools down faster, becoming a high-pressure zone that pushes dry winds toward the warmer sea, creating the seasonal cycle.

97. (D) Christmas
The term 'El Nino' means "The Little Boy" in Spanish. This name was originally used by fishermen along the coasts of Ecuador and Peru to describe the periodic arrival of unusually warm water. Since this phenomenon often became most noticeable around the end of the year, coinciding with the Christmas season, it was given this name, referring to the Christ Child.

98. (A) Snowfall
In addition to bringing rainfall to the plains, Western Disturbances cause significant snowfall in the higher altitudes of the Himalayan ranges during winter. This snow accumulation is vital because it forms glaciers and ensures a steady supply of meltwater to perennial rivers like the Ganga and Indus during the dry summer months, supporting millions of people living in the downstream regions.

NODIA

99. (B) Pre-monsoon summer (April-May)
Norwesters, or Kalbaisakhi, are violent thunderstorms that occur during the pre-monsoon summer months of April and May. They are most frequent in the eastern states of West Bengal, Odisha, and Assam. These storms are triggered by the interaction of dry, cool air from the plateau with warm, moist air from the Bay of Bengal, resulting in intense rain and strong winds.

100. (C) Influencing timing, distribution, and quantum of monsoon rain.
The El Nino-Southern Oscillation cycle is one of the most important global factors affecting the Indian monsoon. By altering atmospheric circulation, ENSO directly influences when the monsoon arrives, how the rainfall is distributed across different states, and the total amount of precipitation received. These variations have a

profound impact on crop planting, growth, and overall agricultural productivity throughout the entire country.

101. (A) The Bay of Bengal branch
Because of their geographic location in the southeastern part of the Bay of Bengal, the Andaman and Nicobar Islands are the first Indian territories to encounter the southwest monsoon. The Bay of Bengal branch of the monsoon typically reaches these islands around mid-May, well before the monsoon arrives at the Kerala coast on the mainland, marking the beginning of the rainy season.

102. (A) Both A and R are true and R is the correct explanation of A.
During the southwest monsoon, the Tamil Nadu coast remains relatively dry. This is because it lies parallel to the path of the Bay of Bengal branch, preventing moisture interception. Furthermore, it is situated on the leeward side of the Western Ghats, placing it in a rain-shadow region for the Arabian Sea branch. Both factors combine to limit rainfall during summer.

103. (B) Northward cold winds following a Western Disturbance passage.
Cold wave conditions in central India, including Madhya Pradesh, are often triggered after the passage of a Western Disturbance. Once the storm system moves away, the skies clear and cold, dry winds from the snow-clad Himalayas blow southward. These winds cause a rapid and sharp drop in temperature, often leading to frost and severe cold conditions for several consecutive days.

104. (D) Westerlies
Western Disturbances are extratropical cyclones that originate in the Mediterranean region. Their eastward movement across West and South Asia is driven by the prevailing global wind belt known as the Westerlies. In the upper atmosphere, these systems are specifically steered by the high-speed subtropical westerly jet stream, which directs them toward the northwestern parts of the Indian subcontinent during winter.

105. (C) Western Rajasthan and Northern Gujarat.
Western Rajasthan and northern Gujarat are located in the arid and semi-arid zones of India. These regions receive very low annual rainfall, often less than 50 cm. This is due to their distance from primary moisture sources and the lack of mountain barriers to intercept monsoon winds, resulting in a desert-like environment with sparse vegetation and significant water scarcity challenges.

106. (B) Negative correlation where El Nino coincides with poor monsoons.
Sir Gilbert Walker discovered a significant negative correlation between the Southern Oscillation and monsoon rainfall. He observed that when sea surface pressures are high over the Pacific, indicating El Nino, the Indian monsoon tends to be weak, leading to deficient rainfall and potential droughts. This scientific discovery laid the foundation for modern long-range forecasting of the seasonal monsoon rains in India.

107. (A) Kerala and Coastal Karnataka
Mango showers are localized pre-monsoon rains that occur toward the end of the summer season. They are most commonly experienced along the southwestern coast of India, particularly in Kerala and coastal Karnataka. These showers are called mango showers because they play a vital role in the early ripening of the mango crop, which is an important commercial fruit in these regions.

108. (A) The Southern Oscillation
The El Nino phenomenon consists of both oceanic and atmospheric changes. While El Nino refers to the warming of the ocean surface waters, the Southern Oscillation describes the accompanying changes in atmospheric pressure across the Pacific Ocean. Because these two processes are deeply linked and occur together, scientists use the term ENSO to describe the entire integrated ocean-atmosphere climate cycle.

109. (A) II, I, III, IV
Western Disturbances enter India from the northwest and travel toward the east. Therefore, they typically pass through Jammu and Kashmir first, followed by the plains of Punjab and Haryana. They then continue their journey across Uttar Pradesh and finally reach the state of Bihar in the east. This west-to-east progression dictates the timing of winter rainfall across northern and eastern India.

Click Here to Buy book on Amazon

110. (C) I, II, III and IV
All the provided statements are correct descriptions of the ENSO cycle. El Nino involves warming that deepens the thermocline and increases rainfall in the eastern Pacific. La Nina is characterized by stronger trade winds and cooling. Both phases represent significant departures from normal climate conditions and have the power to drastically alter global atmospheric circulation, impacting weather systems on every continent.

111. (D) North-easterly
During the winter season in India, a high-pressure system develops over the landmass while the surrounding oceans remain relatively warmer. This creates a pressure gradient that causes winds to blow from the northeast toward the southwest. These north-easterly trade winds are generally dry as they originate over land, except when they cross the Bay of Bengal to bring rain to Tamil Nadu.

112. (B) The presence of a strong El Nino.
The Southern Oscillation Index measures the pressure difference between Tahiti and Darwin. A strongly negative SOI value indicates that the air pressure in the central Pacific is lower than normal, while pressure in the western Pacific is higher. This pressure pattern is a hallmark of an El Nino event, which is often associated with weaker monsoons and reduced rainfall in India.

113. (C) Difference between western and eastern poles in the Indian Ocean.
The Indian Ocean Dipole is a climate phenomenon characterized by an irregular oscillation of sea surface temperatures. It is measured by the Dipole Mode Index, which is the difference in sea surface temperature anomalies between the western tropical Indian Ocean and the southeastern tropical Indian Ocean near Indonesia. These temperature gradients influence regional rainfall patterns and the intensity of the monsoon.

114. (B) Can lead to severe heatstroke and dehydration.
The Loo is an extremely hot and dry wind that blows across the northern and central plains of India during summer. Because of its high temperature and parching nature, prolonged exposure to the Loo can be dangerous. It causes rapid evaporation of moisture from the body, leading to severe dehydration, heat exhaustion, and potentially fatal heatstrokes, making it a significant summer health hazard.

115. (D) Moisture from Western Disturbances combined with low temperatures.
Foggy conditions in northern India during winter are often triggered when a Western Disturbance brings moisture into the region. After the storm passes, the moisture remains in the air. On clear nights, as the ground cools rapidly, the water vapor condenses into tiny droplets near the surface. This combination of high humidity and low temperatures leads to dense and persistent winter fog.

116. (D) Extreme and devastating floods in parts of India.
While La Nina generally brings beneficial rainfall to the Indian subcontinent, an exceptionally strong phase can lead to excessive precipitation. When the monsoon winds are overly intensified, it can result in persistent heavy downpours that overwhelm river systems and drainage networks. This often leads to extreme and devastating floods in many states, causing significant damage to infrastructure, life, and regional property.

117. (D) Clear skies and lower humidity followed by dropping temperatures.
The retreating monsoon season, occurring in October and November, marks the transition from the rainy season to winter. It is characterized by the gradual clearing of skies as the clouds disappear. While the humidity remains initially high, it soon begins to drop. This is followed by a steady decrease in temperatures across the subcontinent, signaling the onset of the dry winter months.

118. (D) P-2, Q-4, R-3, S-1
The Himalayas block cold winds from Central Asia. The Western Ghats cause heavy orographic rainfall on the Malabar coast. The Aravalli Range fails to block the Arabian Sea branch because it lies parallel to it, leaving Rajasthan dry. The Tibetan Plateau undergoes intensive summer heating, which creates a low-pressure system that drives the entire Indian monsoon circulation toward the subcontinent.

Downloaded from www.pdf.tube

119. (A) Break in the monsoon
A "break" in the monsoon is a period during the rainy season when the monsoon trough shifts away from its normal position, usually moving toward the Himalayan foothills. This results in a temporary cessation of rainfall over the plains and central India for a week or more. Such breaks are a normal part of the monsoon's intra-seasonal variability but can cause agricultural stress.

120. (A) Punjab
Punjab is a major producer of wheat in India. The winter rainfall brought by Western Disturbances, although modest in quantity, is extremely valuable for the wheat crop during its growth phase in the dry winter months. This moisture helps in grain development and ensures a high yield, making these storms vital for the agricultural economy and food security of the state.

121. (A) Ensures steady meltwater to perennial rivers in summer.
Heavy snowfall in the Himalayas during winter acts as a natural water storage system. As the temperatures rise during the following spring and summer, the snow and glaciers melt. This provides a continuous and steady flow of water to major perennial rivers like the Indus, Ganga, and Brahmaputra, which is essential for irrigation, drinking water, and hydropower throughout the dry season.

122. (D) Moderate summers and moderate winters.
The Malwa Plateau in western Madhya Pradesh is famous for its pleasant and equable climate. Due to its elevation and geographic position, it avoids the extreme heat experienced in the northern plains and the extreme cold seen in the higher mountains. Historically, travelers have praised its climate, describing the summers as not too hot and the winters as comfortably cool and mild.

123. (C) Generate heavy rainfall in NW Ganga plains.
As the southwest monsoon progresses, the Arabian Sea branch and the Bay of Bengal branch eventually meet over the northwestern parts of the Ganga plains. This convergence of two moisture-rich air masses leads to intensive atmospheric instability and heavy precipitation. This merging is responsible for providing significant rainfall to states like Haryana, Punjab, and western Uttar Pradesh during the peak season.

124. (B) More localized flash floods and reduced infiltration during monsoons.
Forests play a critical role in regulating the hydrological cycle in mountainous regions. Deforestation in the Himalayas would reduce the ability of the land to absorb and hold rainwater. Without the protective tree cover, heavy monsoon rains would lead to rapid surface runoff, causing frequent flash floods and landslides. Additionally, groundwater recharge would decrease as water fails to infiltrate into the soil.

125. (C) P-1, Q-2, R-3, S-4
Pachmarhi receives the highest rainfall in the state. The northern districts like Bhind and Morena are the driest, receiving very low rainfall. Eastern Madhya Pradesh experiences high rainfall due to its proximity to the Bay of Bengal branch. The Malwa region in the west receives moderate rainfall, typically between 75 and 100 cm, reflecting the diverse climatic zones within Madhya Pradesh.

126. (A) Leeward side
In orographic rainfall, moisture-laden winds hit the windward side of a mountain and are forced to rise, causing rain. By the time the winds cross the summit and descend the other side, they have lost most of their moisture and become warmer through compression. This drier side is known as the leeward side or the rain-shadow area, which receives significantly less precipitation.

127. (B) October Heat
During the retreating monsoon season, the skies become clear and the sun shines brightly. However, the ground remains moist from the preceding rains, leading to very high levels of humidity. This combination of high temperature and high humidity creates oppressive and muggy weather conditions in many parts of India during September and October, a phenomenon colloquially referred to as October Heat.

128. (D) Onset can fluctuate by days to weeks from the normal date.
While the Indian Meteorological Department provides normal dates for the monsoon's arrival, the actual onset is highly variable. Depending on complex global and regional atmospheric factors, the monsoon can arrive several days early or be delayed by weeks. This variability

NODIA

makes the monsoon a difficult system to predict with absolute certainty and has significant implications for national agricultural planning.

129. (B) Ganjbasoda (Vidisha) or Khajuraho
During the summer month of May, northern and central parts of Madhya Pradesh record some of the highest temperatures in the state. Locations like Ganjbasoda in Vidisha district and Khajuraho have historically recorded extreme temperatures, sometimes exceeding 45 to 48 degrees Celsius. This intense heat is a result of the region's inland position and the direct influence of solar radiation.

130. (A) Large portion of Indian agriculture relies on rainfed irrigation.
A significant percentage of India's net sown area lacks access to permanent irrigation and depends on seasonal rainfall. As agriculture is the backbone of the rural economy, any monsoon variability directly affects crop yields. This creates a ripple effect throughout the national economy, influencing food prices, inflation, and rural demand, highlighting the country's continued dependence on favorable weather patterns.

www.nodia.in

Click Here to Buy book on Amazon

CHAPTER 04

Climate Change and Natural Disasters

NODIA

1. Match List I with List II and select the correct answer using the codes given below:
List I: (Greenhouse Gas)
P. Carbon dioxide
Q. Methane
R. Nitrous oxide
S. Chlorofluorocarbons
List II: (Major Source)
1. Agricultural soil management
2. Refrigerants and aerosols
3. Fossil fuel combustion
4. Wetlands and livestock
(A) P-3, Q-4, R-1, S-2
(B) P-4, Q-3, R-2, S-1
(C) P-3, Q-1, R-4, S-2
(D) P-1, Q-4, R-3, S-2

2. How has climate change primarily altered the behavior of the Indian Summer Monsoon?
(A) It has caused the monsoon to permanently arrive two months earlier.
(B) It has completely shifted the monsoon winds from the southwest to the northeast.
(C) It has led to longer dry spells interspersed with short periods of heavy rainfall.
(D) It has doubled the total volume of rainfall across all Indian states uniformly.

3. Read the following statements and select the correct response:
Statement I: Climate change can only be caused by human activities.
Statement II: Natural factors such as volcanic eruptions and variations in solar radiation also contribute to changes in the Earth's climate over long periods.
(A) Statement I is correct but Statement II is incorrect
(B) Statement I is incorrect but Statement II is correct
(C) Both Statement I and Statement II are correct
(D) Both Statement I and Statement II are incorrect

4. Arrange the following major Himalayan glaciers in order from West to East:
I. Zemu Glacier
II. Siachen Glacier
III. Gangotri Glacier
IV. Milam Glacier
Which of the following represents the correct geographical arrangement?
(A) II, III, IV, I
(B) II, IV, III, I
(C) III, II, IV, I
(D) I, IV, III, II

5. Which of the following statements about the functioning of the IPCC is the most appropriate?
(A) Implementing original field-based scientific research projects across various global climatic zones
(B) Assessing and reviewing global scientific, technical, and socio-economic information related to climate change
(C) Maintaining a network of autonomous global climate monitoring stations to gather real-time data
(D) Functioning as an international regulatory body with the power to impose carbon taxes on nations

6. Sea level rise poses a critical threat to coastal agriculture in states like West Bengal and Odisha primarily through which mechanism?
(A) Increased frequency and intensity of lightning strikes during the monsoon
(B) Saltwater intrusion into coastal aquifers and fertile deltaic farmlands
(C) Enhanced siltation processes blocking the natural discharge at major river mouths
(D) Persistent over-saturation of soils leading to widespread frost damage to crops

7. Which of the following best defines climate change as distinguished from natural climate variability?
(A) Short-duration atmospheric fluctuations in regional weather cycles observed over a single season
(B) Sustained shifts in global weather patterns and temperatures resulting from human-induced activities
(C) Predictable and repetitive cyclical changes in precipitation levels resulting from natural ocean currents
(D) Variations in day-to-day temperature ranges recorded by meteorological stations over a few years

8. Which region of India is projected to experience the highest regional temperature rise under high-emission scenarios by the end of the 21st century?
(A) The Western Ghats
(B) The Hindu Kush Himalayas
(C) The Coastal Plains
(D) The Andaman and Nicobar Islands

9. The rapid retreat of the Gangotri Glacier has severe implications for which of the following river basins?
(A) Indus River Basin
(B) Ganga River Basin
(C) Brahmaputra River Basin
(D) Godavari River Basin

10. In the context of the enhanced greenhouse effect, which of the following atmospheric layers experiences the maximum warming?
(A) Stratosphere
(B) Mesosphere
(C) Troposphere
(D) Thermosphere

11. The islands of Lakshadweep are exceptionally vulnerable to sea level rise because they are structurally:
(A) High-altitude volcanic islands
(B) Tectonic upliftment zones
(C) Low-lying coral atolls
(D) Continental fragments

12. Identify the incorrect statement regarding water vapor as a greenhouse gas.
(A) It is the most abundant greenhouse gas in the Earth's atmosphere.
(B) It plays a crucial role in a positive feedback loop that amplifies global warming.
(C) Its concentration in the atmosphere is directly controlled by human industrial emissions.
(D) Its atmospheric concentration depends largely on air temperature.

13. Consider the following consequences of climate change projected for India:
I. Increased occurrence of extreme precipitation events.
II. Expansion of arid regions in the northwestern parts.
III. Reduction in the frequency of tropical cyclones in the Bay of Bengal.
IV. Increased heat stress leading to lower labor productivity.
Which of the statements given above are correct?
(A) I, II, and III only
(B) II, III, and IV only
(C) I, II, and IV only
(D) I, III, and IV only

14. According to recent IPCC Assessment Reports, which specific vulnerability is most strongly highlighted for the Indian subcontinent?
(A) Total desertification of the Indo-Gangetic plain by 2050
(B) Complete freezing of the Arabian Sea during winter months
(C) Increased frequency of extreme heatwaves and erratic monsoon precipitation
(D) Sudden emergence of new volcanic hotspots in the Deccan Plateau

15. Identify the Indian coastal city considered most vulnerable to economic losses due to projected sea level rise by 2050.
(A) Surat
(B) Mangaluru
(C) Visakhapatnam
(D) Mumbai

16. Natural climate variability refers to variations in the mean state of the climate on all spatial and temporal scales beyond that of individual weather events. Which of the following is a classic example of natural climate variability?

Downloaded from www.pdf.tube

(A) The El Nino Southern Oscillation (ENSO) cycle
(B) Ocean acidification due to industrial emissions
(C) Stratospheric ozone depletion by chlorofluorocarbons
(D) Deforestation-induced localized heating

17. What is the primary water security implication of glacial retreat in the Himalayas for northern India?
(A) Initial increase in river flow and floods followed by long-term water scarcity
(B) Immediate and permanent cessation of all perennial river flows during the summer season
(C) Improved agricultural productivity due to the stabilization of water levels across the plains
(D) Total transition from river-based irrigation systems to exclusive reliance on local rainfall

18. The enhanced greenhouse effect is fundamentally caused by which of the following mechanisms?
(A) Greenhouse gas absorption and re-emission of outgoing terrestrial infrared radiation
(B) Increased planetary albedo through the reflection of incoming solar radiation by atmospheric aerosols
(C) Thinning of the stratospheric ozone layer allowing higher levels of ultraviolet radiation to reach the surface
(D) Absorption of shortwave solar energy by the Earth's surface due to changes in land-use patterns

19. Which of the following is an observed effect of changing monsoon patterns on Madhya Pradesh specifically?
(A) Permanent cessation of all monsoon rainfall activity across the Malwa plateau region
(B) Rapid transformation of the state's central landscapes into a high-altitude cold desert
(C) Consistent surplus of winter rainfall that entirely removes the necessity for agricultural irrigation
(D) Frequent intense rainfall causing flash floods in the Narmada and Tapti river basins

20. The Ministry of Earth Sciences (MoES) report indicates that the average temperature over India has witnessed a significant trend. What has been the approximate rise in India's average temperature during the 1901-2018 period?
(A) 0.2 degrees Celsius
(B) 0.7 degrees Celsius
(C) 1.5 degrees Celsius
(D) 2.1 degrees Celsius

NODIA

21. Which specific threat does rising sea surface temperatures pose to the Andaman Islands alongside sea level rise?
(A) Frequent and intense occurrences of deep-focus seismic events and earthquakes
(B) Depletion of endemic freshwater fish species due to the freezing of inland lakes
(C) Rapid expansion of mangrove forest cover into established agricultural land areas
(D) Widespread coral bleaching and loss of reef-associated biodiversity

22. Methane is considered a potent greenhouse gas. Which of the following is the largest anthropogenic source of methane emissions in India?
(A) Fugitive emissions from deep-underground coal mining operations
(B) Enteric fermentation in livestock and wetland rice cultivation
(C) Methane release from anaerobic industrial wastewater treatment plants
(D) Incomplete combustion of fuels in heavy-duty automobile exhaust systems

23. The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by which of the following organizations?
(A) United Nations Development Programme (UNDP) and World Bank
(B) World Economic Forum (WEF) and United Nations General Assembly (UNGA)
(C) International Union for Conservation of Nature (IUCN) and WMO
(D) United Nations Environment Programme (UNEP) and World Meteorological Organization (WMO)

24. The Siachen Glacier, currently facing threats from both militarization and climate change, is located in which mountain range?

(A) Pir Panjal Range
(B) Zaskar Range
(C) Dhauladhar Range
(D) Karakoram Range

25. A significant consequence of climate change observed in India's temperature profile is:
(A) Significant and steady decrease in the annual frequency of exceptionally warm nights
(B) Rising minimum temperatures occurring at a faster rate than maximum temperatures
(C) Sustained increase in the frequency of extremely cold days during the winter months
(D) Uniform decrease in the diurnal temperature range across all geographical regions and seasons

26. Which of the following greenhouse gases has the highest Global Warming Potential (GWP) over a 100-year time horizon?
(A) Carbon dioxide
(B) Methane
(C) Water vapor
(D) Nitrous oxide

27. Which of the following factors contributes most significantly to the current global sea level rise affecting Indian coasts?
(A) Thermal expansion of ocean water and the melting of land-based ice masses
(B) Seasonal melting of floating sea ice located within the Arctic Ocean basin
(C) Increased deposition of sediment from major peninsular rivers into coastal deltas
(D) Large-scale tectonic subsidence affecting the geological stability of the Indian plate

28. Given below are two statements, one is labelled as Assertion (A) and the other as Reason (R):
Assertion (A): The Earth's surface continuously radiates energy back into space in the form of infrared radiation.
Reason (R): Greenhouse gases are highly transparent to incoming solar radiation but strongly absorb infrared radiation.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

29. Identify the incorrect statement regarding monsoon variability in the context of global warming.
(A) Aerosol concentrations over the Indian subcontinent complicate monsoon rainfall projections.
(B) Spatial variability of monsoon rainfall has increased, causing simultaneous floods and droughts in different regions.
(C) A warming Indian Ocean tends to decrease the moisture-carrying capacity of the monsoon winds.
(D) The onset and withdrawal dates of the monsoon are becoming more erratic.

30. Consider the following statements regarding the IPCC:
I. It releases Assessment Reports which form the scientific basis for international climate negotiations.
II. Its Sixth Assessment Report (AR6) warns that global warming of 1.5 degrees Celsius will be exceeded during the 21st century without deep emission cuts.
III. The IPCC strictly prescribes the exact climate policies that developing countries like India must adopt.
Which of the statements given above are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II, and III

31. Read the following statements and select the correct response:
Statement I: Climate change is likely to alter the geographic distribution of agricultural pests and diseases in India.
Statement II: Warmer temperatures generally slow down the reproductive cycles of most insect pests.
(A) Statement I is correct but Statement II is incorrect
(B) Statement I is incorrect but Statement II is correct
(C) Both Statement I and Statement II are correct
(D) Both Statement I and Statement II are

Click Here to Buy book on Amazon

incorrect

32. Under the Paris Agreement, India updated its Nationally Determined Contributions (NDCs) in 2022. What is India's target regarding the emissions intensity of its GDP by 2030, compared to 2005 levels?
(A) Reduce by 33-35%
(B) Reduce by 45%
(C) Reduce by 50%
(D) Reduce by 65%

33. The frequency and intensity of extreme weather events in India are often modulated by large-scale oceanic phenomena. Which of the following typically brings deficit rainfall and increased drought conditions to India?
(A) La Nina
(B) El Nino
(C) Positive Indian Ocean Dipole
(D) Madden-Julian Oscillation

34. Which of the following is NOT one of the eight original missions under the NAPCC?
(A) National Solar Mission
(B) National Mission for Enhanced Energy Efficiency
(C) National Mission on Sustainable Habitat
(D) National Mission on Nuclear Energy

35. Climate change influences the spread of vector-borne diseases in India primarily by:
(A) Expansion of the geographical range and transmission seasons of disease vectors
(B) Significant reduction in the average lifespan of common vector mosquito species
(C) Decrease in the availability of stagnant water bodies required for vector breeding
(D) Induction of genetic mutations that provide humans with natural immunity to diseases

36. The primary objective of the National Water Mission under the NAPCC is to increase water use efficiency by:
(A) 10%
(B) 20%
(C) 30%
(D) 50%

37. Find the odd one out concerning the impacts of sea level rise on Indian coastal islands.
(A) Enhanced glacial formation
(B) Coastal erosion
(C) Submergence of low-lying settlements
(D) Loss of freshwater lenses

38. Identify the incorrect statement regarding climate-induced displacement in India.
(A) India experiences high levels of internal displacement annually due to hydro-meteorological disasters.
(B) Riverbank erosion in Assam is a significant driver of localized displacement.
(C) Cyclones on the eastern coast frequently cause temporary, and sometimes permanent, displacement of coastal communities.
(D) International law provides formal legal refugee status and protection explicitly for climate refugees under the 1951 Refugee Convention.

39. Which of the following statements represents India's target for creating an additional carbon sink by 2030 through additional forest and tree cover?
(A) 1.5 to 2 billion tonnes of CO_2 equivalent
(B) 2.5 to 3 billion tonnes of CO_2 equivalent
(C) 3.5 to 4 billion tonnes of CO_2 equivalent
(D) 4.5 to 5 billion tonnes of CO_2 equivalent

40. Coral bleaching occurs primarily when:
(A) Direct discharge of industrial chemical bleaching agents into the surrounding ocean waters
(B) Excessive accumulation of marine sediment covering polyps and blocking feeding mechanisms
(C) Active consumption of the outer calcium carbonate skeleton by specialized marine predators
(D) Coral expulsion of symbiotic zooxanthellae algae from their tissues under environmental stress

41. Select the correct chronological order of the establishment of the following environmental frameworks:
(A) Kyoto Protocol → UNFCCC → Paris Agreement → NAPCC
(B) UNFCCC → Kyoto Protocol → NAPCC → Paris Agreement
(C) Kyoto Protocol → NAPCC → UNFCCC →

NODIA

Paris Agreement
(D) UNFCCC → NAPCC → Kyoto Protocol → Paris Agreement

42. According to various economic surveys and climate studies, climate change is expected to have a negative impact on the yield of which major staple crop in northern India due to rising winter temperatures?
(A) Rice
(B) Maize
(C) Wheat
(D) Pearl Millet (Bajra)

43. Match List I with List II and select the correct answer using the codes given below:
List I: (Climate Target/Agreement)
P. Paris Agreement
Q. Kyoto Protocol
R. Nationally Determined Contributions (NDCs)
S. Net Zero Target
List II: (Key Feature)
1. Country's self-defined climate pledges
2. Legally binding emission targets for developed nations only
3. Balancing greenhouse gas emissions with removals
4. Limiting global temperature rise to well below 2°C
(A) P-4, Q-2, R-1, S-3
(B) P-2, Q-4, R-3, S-1
(C) P-4, Q-1, R-2, S-3
(D) P-1, Q-2, R-4, S-3

44. Which pair correctly matches the vector-borne disease with its primary vector, which is expanding its habitat in India due to global warming?
(A) Malaria - Aedes aegypti
(B) Dengue - Anopheles stephensi
(C) Kala-azar - Culex quinquefasciatus
(D) Chikungunya - Aedes aegypti

45. The Jawaharlal Nehru National Solar Mission initially set a target of 20 GW of grid-connected solar power by 2022. This target was later revised to:
(A) 50 GW
(B) 100 GW
(C) 150 GW
(D) 200 GW

46. Which extreme weather event has seen a documented exponential increase in frequency and intensity over the central Indian region in recent decades?
(A) Snowstorms
(B) Multi-day extreme rainfall events
(C) Severe cyclonic storms in winter
(D) Tornadoes

47. How many core national missions form the foundation of the National Action Plan on Climate Change (NAPCC)?
(A) Six
(B) Eight
(C) Ten
(D) Twelve

48. How is climate change impacting the apple farming sector in Himachal Pradesh?
(A) Apple cultivation zones shifting toward lower altitudes to maximize heat exposure
(B) Cultivation zones shifting to higher altitudes due to a lack of winter chilling hours
(C) Total apple production doubling across all elevations due to increased seasonal rainfall
(D) Natural replacement of existing apple orchards by commercial tropical fruit plantations

NODIA

49. As part of its updated NDCs, India committed to achieving what percentage of cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030?
(A) 30%
(B) 40%
(C) 50%
(D) 60%

50. What is the generally accepted definition of "Climate Refugees"?
(A) People who migrate internationally seeking better economic opportunities in green industries
(B) Activists who seek political asylum after protesting against fossil fuel companies
(C) Individuals who are forced to flee their home region due to sudden or long-term changes to their local environment
(D) Populations relocated by governments to

construct large hydroelectric dams

51. Which institution coordinates the National Mission for Sustaining the Himalayan Ecosystem (NMSHE)?
(A) Ministry of Environment, Forest and Climate Change (MoEFCC)
(B) NITI Aayog
(C) Ministry of Earth Sciences (MoES)
(D) Department of Science and Technology (DST)

52. Which of the following describes the "Carbon Fertilization Effect" in agriculture?
(A) The application of carbon-based synthetic fertilizers to degraded soils
(B) The decrease in plant growth due to excessive atmospheric carbon monoxide
(C) The rapid mineralization of soil organic carbon leading to nutrient depletion
(D) The potential increase in photosynthesis and crop yields due to higher atmospheric CO_2 concentrations

53. Consider the following factors:
I. Elevated sea surface temperatures
II. Ocean acidification
III. Increased solar irradiance
IV. Reduced sea level
V. Coastal pollution
Which of the above factor(s) is/are responsible for causing or exacerbating coral bleaching?
(A) I, II, III, and V only
(B) I, III, IV, and V only
(C) II, III, IV, and V only
(D) I, II, III, IV, and V

54. The National Action Plan on Climate Change (NAPCC) was formally launched by the Government of India in which year?
(A) 2004
(B) 2008
(C) 2012
(D) 2015

55. The continuous erosion and submergence of islands like Ghoramara have created a high number of climate refugees in which Indian region?
(A) Sundarbans Delta
(B) Gulf of Kutch
(C) Majuli Island
(D) Kathiawar Peninsula

56. Consider the following cause and effect relationship:
Cause: Increased atmospheric warming enhances the atmosphere's capacity to hold moisture.
Effect: What is the most direct consequence of this on extreme weather events in India?
(A) Intense short-duration rainfall events causing significant urban flooding
(B) Substantial decrease in the cumulative volume of the annual monsoon precipitation
(C) More frequent occurrences of mild drizzles distributed evenly throughout the year
(D) Total suppression of all cyclonic storm activities within the Bay of Bengal region

57. Consider the following missions:
I. National Mission for a Green India
II. National Mission for Sustainable Agriculture
III. National Mission on Oceanic Biodiversity
Which of the above mission(s) is/are NOT part of the National Action Plan on Climate Change (NAPCC)?
(A) I only
(B) II only
(C) III only
(D) I and III

58. In which of the following Indian marine regions was mass coral bleaching observed most severely during the recent global warming events?
(A) Gulf of Mannar and Lakshadweep
(B) Sunderbans Delta
(C) Gulf of Khambhat
(D) Chilika Lake

59. India pledged at the COP26 summit in Glasgow to achieve the target of net-zero emissions by which year?
(A) 2050
(B) 2060
(C) 2070
(D) 2080

60. Due to rising temperatures, regions in India that were previously considered free of malaria and dengue are now reporting cases. Which geographical area exemplifies this trend?

Downloaded from www.pdf.tube

(A) The Thar Desert
(B) The high-altitude regions of the Himalayas
(C) The Deccan Plateau
(D) The coastal backwaters of Kerala

61. The state of Madhya Pradesh predominantly falls into which seismic zones?
(A) Zones IV and V
(B) Zones II and III
(C) Zones III and IV
(D) Zones I and II

62. The Bundelkhand region, spanning across UP and MP, frequently suffers from droughts. Which geological feature significantly limits groundwater availability in this region?
(A) Hard granitic terrain with low rock porosity
(B) Deep and porous alluvial deposits found across the region
(C) Extensive limestone karst topography with numerous sinkholes
(D) Thick layers of organic peat soil covering the landscape

63. Biological hazards involve threats posed by biological agents. Which of the following is an example of a biological disaster?
(A) Locust swarm attack on crops
(B) Toxic gas leak from a factory
(C) Soil liquefaction
(D) Nuclear radiation leak

64. Historically, how does the frequency of cyclonic storms compare between the Bay of Bengal and the Arabian Sea?
(A) Arabian Sea experiencing a higher frequency of cyclonic events than the Bay of Bengal
(B) Both sea basins experiencing an identical number of severe cyclonic storms each year
(C) The Bay of Bengal experiencing significantly more cyclones than the Arabian Sea
(D) Cyclones forming exclusively in the Bay of Bengal and never in the Arabian Sea

65. Arrange the following major Indian earthquakes in chronological order from earliest to most recent:
I. Bhuj Earthquake
II. Latur Earthquake
III. Uttarkashi Earthquake
IV. Sikkim Earthquake
Which of the following represents the correct chronological sequence?
(A) III, II, I, IV
(B) II, III, I, IV
(C) III, I, II, IV
(D) I, III, II, IV

66. Cyclones in India predominantly occur during which two periods?
(A) January to March and July to August
(B) Pre-monsoon (April-May) and Post-monsoon (October-November)
(C) Peak summer (June) and Peak winter (December)
(D) Throughout the southwest monsoon season (June-September) continuously

67. Based on standard disaster management classifications, which of the following is categorized as a geological hazard?
(A) Cyclone
(B) Drought
(C) Earthquake
(D) Epidemic

68. Which of the following is considered a non-structural mitigation measure for flood disaster management?
(A) Construction of embankments
(B) Flood plain zoning and regulation
(C) Dredging of river channels
(D) Building of retention dams

69. In the structure of a mature tropical cyclone, the "Eye" is characterized by:
(A) Calm conditions with clear skies and low pressure
(B) Zones of most violent wind speeds and heaviest rainfall
(C) Regions of strong updrafts and towering cumulonimbus clouds
(D) Spiraling bands of high-pressure air moving away from the center

70. The devastating Bhuj earthquake, which caused massive destruction in Gujarat, occurred on Republic Day of which year?
(A) 1999
(B) 2000
(C) 2001
(D) 2004

NODIA

71. Cyclone Tauktae (2021) intensified rapidly and struck the western coast of India. In which water body did it originate?
(A) Arabian Sea
(B) Andaman Sea
(C) Bay of Bengal
(D) Gulf of Mannar

72. The Bureau of Indian Standards (BIS) has grouped the country into how many seismic zones based on historical seismic activity?
(A) Three
(B) Four
(C) Five
(D) Six

73. The Vidarbha region in Maharashtra is highly prone to agricultural droughts. A major contributing factor to the severity of this crisis is:
(A) Complete absence of any major or minor river systems within the entire state area
(B) Excessive soil salinization resulting from the influence of coastal oceanic tides
(C) High annual frequency of severe cyclonic storms that routinely destroy mature crops
(D) Heavy reliance on water-intensive cash crops without assured irrigation facilities

74. Which river is famously known as the "Sorrow of Assam" due to its frequent and devastating annual floods?
(A) Barak
(B) Teesta
(C) Brahmaputra
(D) Subansiri

75. The Bay of Bengal is traditionally more prone to cyclonic formation because of:
(A) Significantly higher salinity levels compared to the waters of the Arabian Sea
(B) Constant presence of high-pressure weather systems over the Andaman Sea region
(C) Cooling effects caused by the presence of the seasonal Somali current system
(D) Higher sea surface temperatures and stratification that prevents water mixing

76. Hydro-meteorological hazards are caused by extreme meteorological or climatic events. Which of the following falls under this category?
(A) Volcanic eruption
(B) Tsunami
(C) Pest infestation
(D) Cloudburst

77. Given below are two statements, one is labelled as Assertion (A) and the other as Reason (R):
Assertion (A): Tropical cyclones do not form exactly at the equator.
Reason (R): The Coriolis force is zero at the equator, preventing the development of a rotating vortex.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

78. Consider the following statements regarding the seismic zonation map of India:
I. Zone V covers the areas with the highest risk of earthquakes.
II. Delhi is located in Zone IV.
III. The Andaman and Nicobar Islands are situated in Zone III.
IV. There is no Zone I in the current official classification map.
Which of the statements given above are correct?
(A) I, II, and III only
(B) I, II, and IV only
(C) II, III, and IV only
(D) I, III, and IV only

79. Match List I with List II and select the correct answer using the codes given below:
List I: (Drought-prone Region)
P. Western Rajasthan
Q. Bundelkhand
R. Vidarbha
S. Rayalaseema
List II: (Key Characteristic/Issue)
1. Hard rock terrain and historical neglect of tank irrigation
2. Agrarian distress related to cotton cultivation
3. Extreme aridity and minimal average annual rainfall
4. Rain shadow region of the Eastern Ghats
(A) P-3, Q-1, R-2, S-4
(B) P-1, Q-3, R-4, S-2

Click Here to Buy book on Amazon

STUDYING FROM PDFs?

THINK AGAIN.

If you are studying only from PDFs,
you are wasting valuable time.

Research shows that learning from

PRINTED BOOKS has up to

4× HIGHER RETENTION

than studying from screens.

PRINT BOOK = BETTER MEMORY

PDF = LOWER RETENTION

Those who study from **PRINTED BOOKS**
move **AHEAD.**

Others are left **BEHIND**
in competition.

In competitive exams,
being average is not enough.

STAY ONE STEP AHEAD.

(C) P-3, Q-2, R-1, S-4
(D) P-2, Q-1, R-3, S-4

80. Identify the incorrect statement regarding the flood-prone plains of Uttar Pradesh.
(A) Floods are mainly caused by rivers originating in the Himalayas.
(B) Poor drainage systems and changing river courses exacerbate the flooding.
(C) Eastern Uttar Pradesh is generally more prone to floods than Western Uttar Pradesh.
(D) Flooding in this region occurs exclusively during the winter monsoon.

81. Cyclone Fani (2019) was an extremely severe cyclonic storm that caused extensive damage primarily to which Indian state?
(A) Gujarat
(B) Maharashtra
(C) Odisha
(D) Kerala

82. Which of the following regions falls primarily under Seismic Zone V (Very High Damage Risk Zone)?
(A) North-Eastern India
(B) Malwa Plateau
(C) Coastal plains of Karnataka
(D) Desert regions of Rajasthan

83. The 1991 Uttarkashi earthquake occurred in the Garhwal region of the Himalayas. What is the primary tectonic cause of earthquakes in this region?
(A) Tectonic divergence occurring between the Indian and the Eurasian continental plates
(B) Horizontal sliding of the Indian plate past the edge of the Arabian tectonic plate
(C) Significant volcanic activity occurring deep beneath the Earth's crust in this region
(D) Subduction and collision of the Indian plate under the Eurasian plate

84. The Coriolis force plays a vital role in cyclone formation. In which direction do the winds spiral into a cyclone's low-pressure center in the Northern Hemisphere?
(A) Clockwise
(B) Straight inward
(C) Counter-clockwise
(D) Outward from the center

85. The western regions of Rajasthan face recurring droughts predominantly classified as:
(A) Hydrological drought
(B) Agricultural drought
(C) Meteorological drought
(D) Socio-economic drought

86. Match List I with List II and select the correct answer using the codes given below:
List I: (Hazard Classification)
P. Geological
Q. Hydro-meteorological
R. Biological
S. Anthropogenic/Technological
List II: (Example)
1. COVID-19 Pandemic
2. Landslide
3. Industrial Chemical Leak
4. Heat wave
(A) P-2, Q-4, R-1, S-3
(B) P-4, Q-2, R-1, S-3
(C) P-2, Q-1, R-4, S-3
(D) P-3, Q-4, R-1, S-2

87. Recent climatic studies indicate a shifting trend in cyclone occurrences. What is this observed trend?
(A) Complete cessation of all cyclonic activity during the post-monsoon months
(B) Increased Arabian Sea cyclone frequency with decreased Bay of Bengal intensity
(C) Cyclones shifting their path toward the equator instead of moving northward
(D) Arabian Sea cyclones losing all intensity immediately upon initial formation

NODIA

88. The 1993 Latur earthquake was unusual and scientifically significant primarily because:
(A) Location within the highly active and well-known Himalayan tectonic collision zone
(B) Occurrence in a stable continental region previously considered seismically safe
(C) Rapid triggering of seismic activity by the filling of a large nearby water reservoir
(D) Status as the first major earthquake in India to be accurately predicted by the IMD

89. Which of the following conditions is NOT required for the formation and intensification of tropical cyclones?
(A) Large sea surface with temperature higher

than 27 degrees Celsius
(B) Strong vertical wind shear
(C) Presence of the Coriolis force to create a cyclonic vortex
(D) A pre-existing weak low-pressure area

90. The high flood vulnerability of the plains of northern Bihar is primarily attributed to which river system carrying massive sediment loads from Nepal?
(A) Kosi
(B) Gandak
(C) Son
(D) Ghaghara

91. Select the correct sequence of the standard cyclone warning stages issued by the IMD as a cyclone approaches the coast:
(A) Cyclone Alert → Cyclone Watch → Cyclone Warning → Post Landfall Outlook
(B) Cyclone Watch → Cyclone Alert → Cyclone Warning → Post Landfall Outlook
(C) Cyclone Warning → Cyclone Watch → Cyclone Alert → Post Landfall Outlook
(D) Cyclone Alert → Cyclone Warning → Cyclone Watch → Post Landfall Outlook

92. The "Urban Heat Island" effect exacerbates heat waves in Indian cities. What is the primary cause of this phenomenon?
(A) Reflection of intense sunlight by modern glass buildings in urban centers
(B) Excessive installation and use of solar panels on most residential rooftops
(C) Heat retention by concrete and asphalt combined with a lack of vegetation
(D) High concentrations of atmospheric oxygen found within densely populated areas

93. Why is the east coast of India generally more vulnerable to cyclones than the west coast?
(A) Presence of high mountain ranges that trap cyclones along the eastern coastline
(B) Smaller geographical size of the Bay of Bengal forcing systems onto land quickly
(C) Global trade winds moving cyclonic systems from east to west toward land
(D) Naturally lower atmospheric pressure in the Arabian Sea than the Bay of Bengal

94. The National Disaster Management Authority (NDMA) was established under the Disaster Management Act passed in which year?
(A) 2001
(B) 2004
(C) 2005
(D) 2010

95. Cloudbursts frequently result in devastating flash floods in hilly regions because:
(A) Presence of extremely flat terrain that prevents the natural flow of water
(B) Large water volumes rushing down steep gradients and carrying heavy debris
(C) High acidity levels in rainwater that dissolve mountain rocks instantaneously
(D) Simultaneous occurrences of earthquakes that cause the breaking of large dams

96. The National Disaster Response Force (NDRF), a specialized force for disaster response, functions under the administrative control of the:
(A) Ministry of Defence
(B) Ministry of Home Affairs
(C) Prime Minister's Office
(D) Ministry of Environment, Forest and Climate Change

97. Match List I with List II and select the correct answer using the codes given below:
List I: (Major Cyclone)
P. Amphan
Q. Hudhud
R. Phailin
S. Tauktae
List II: (Most Affected State)
1. Andhra Pradesh
2. Odisha
3. West Bengal
4. Gujarat
(A) P-3, Q-1, R-2, S-4
(B) P-3, Q-2, R-1, S-4
(C) P-2, Q-1, R-3, S-4
(D) P-1, Q-4, R-2, S-3

98. In response to the 2004 disaster, India established the Indian Tsunami Early Warning Centre (ITEWC). Where is this center located?
(A) Hyderabad (INCOIS)
(B) Chennai (NIOT)
(C) New Delhi (IMD)

Downloaded from www.pdf.tube

(D) Goa (NIO)

99. The IMD declares a cold wave in the plains when the minimum temperature falls below a certain threshold and is significantly below normal. What is the absolute minimum temperature threshold used as a criterion for cold wave in plains?
(A) 15 degrees Celsius
(B) 10 degrees Celsius
(C) 5 degrees Celsius
(D) 0 degrees Celsius

100. The Western Ghats experience landslides predominantly during which season?
(A) Pre-monsoon summer months
(B) Peak Southwest Monsoon season
(C) Post-monsoon autumn months
(D) Winter season

101. Which of the following is NOT one of the Four Priorities for Action under the Sendai Framework?
(A) Establishing a centralized global military force for disaster intervention
(B) Investing in disaster risk reduction for resilience
(C) Enhancing disaster preparedness for effective response and to "Build Back Better"
(D) Understanding disaster risk

102. The India Meteorological Department (IMD) issues color-coded weather warnings. What does a "Red" warning indicate?
(A) Take action, extreme weather expected
(B) Be updated, watch out
(C) Be prepared, take action
(D) No warning, normal conditions

103. The IMD declares a heat wave in the plains of India when the maximum temperature reaches at least:
(A) 35 degrees Celsius
(B) 37 degrees Celsius
(C) 40 degrees Celsius
(D) 45 degrees Celsius

104. Which topographic phenomenon predominantly contributes to the formation of cloudbursts in the Himalayan states like Uttarakhand and Himachal Pradesh?
(A) Convectional heating of the plains causing rapid upward air movement
(B) Frontal wedging created by the meeting of warm and cold ocean currents
(C) Large-scale subsidence of cold air masses from the upper stratosphere
(D) Orographic lifting of moisture-laden clouds along steep mountain slopes

105. At the state level, the State Disaster Management Authority (SDMA) is headed by the:
(A) Governor
(B) Chief Secretary
(C) Chief Minister
(D) Director General of Police

106. Based on vulnerability assessments, which state in India has historically suffered the highest number of deaths and maximum economic loss due to tropical cyclones?
(A) Tamil Nadu
(B) Odisha
(C) Karnataka
(D) Goa

107. The occurrence of severe cold waves in north-western India during winter is strongly influenced by the influx of cold air masses following the passage of:
(A) Western Disturbances
(B) Tropical Cyclones
(C) The Southwest Monsoon
(D) The Easterly Jet Stream

108. Landslides in the Himalayan region are highly frequent primarily due to:
(A) Tectonically active, fragile mountains combined with heavy seasonal rainfall
(B) Presence of very old and highly consolidated volcanic rock formations
(C) Excessive wind-based erosion occurring on extremely steep mountain slopes
(D) Extensive commercial mining of coal reserves at higher Himalayan altitudes

NODIA

109. Which geographical region of India constitutes the "Core Heatwave Zone," experiencing the highest frequency of severe heat waves?
(A) Western Ghats and coastal Kerala
(B) Northeast Indian states (Seven Sisters)
(C) The Andaman and Nicobar archipelago

(D) North, Northwest, Central, and Eastern India

110. The devastating Indian Ocean Tsunami of December 26, 2004, was generated by a massive undersea earthquake located off the coast of:
(A) Java
(B) Andaman Islands
(C) Sumatra
(D) Sri Lanka

111. The Sendai Framework for Disaster Risk Reduction, to which India is a signatory, covers the period:
(A) 2005 - 2015
(B) 2010 - 2020
(C) 2015 - 2030
(D) 2020 - 2040

112. The IMD acts as a Regional Specialised Meteorological Centre (RSMC) to provide cyclone advisories to countries in which region?
(A) South China Sea
(B) North Indian Ocean region
(C) Western Pacific Ocean
(D) Mediterranean Sea

113. According to the IMD, a rainfall event is officially classified as a "cloudburst" if the rainfall rate is:
(A) Greater than 50 mm per hour over a geographical area of approximately 20-30 sq. km.
(B) Greater than 100 mm per hour over a geographical area of approximately 20-30 sq. km.
(C) Greater than 200 mm per hour over any given area.
(D) Continuous rainfall for 48 hours exceeding 500 mm.

114. Cold waves and frost cause severe economic damage in northern and central India primarily by:
(A) Freezing major rivers and halting navigation
(B) Destroying standing Rabi crops like mustard, gram, and potatoes
(C) Causing widespread collapse of concrete buildings
(D) Inducing spontaneous forest fires

115. Which of the following is a key characteristic of a tsunami wave as it approaches shallow coastal waters?
(A) Its speed increases drastically while its height decreases.
(B) Its wavelength expands to thousands of kilometers.
(C) It completely dissipates before reaching the shoreline.
(D) Its speed decreases, but its wave height increases significantly.

116. The majority of loss of life during a severe tropical cyclone making landfall is historically caused by:
(A) Lightning strikes
(B) Uprooted trees
(C) Heavy rains in the interior regions days later
(D) Storm surges inundating low-lying coastal areas

117. Who serves as the ex-officio Chairperson of the National Disaster Management Authority (NDMA)?
(A) Minister of Home Affairs
(B) President of India
(C) Minister of Earth Sciences
(D) Prime Minister of India

118. Which of the following anthropogenic activities is a major trigger for landslides in vulnerable hilly states of India?
(A) Harvesting of rainwater in rooftop tanks
(B) Afforestation on steep gradients
(C) Construction of wind farms on plateaus
(D) Unscientific road construction and slope cutting

119. High ambient temperatures combined with high humidity create a dangerous condition for human health, as the body loses its ability to cool itself through sweating. This metric is measured by the:
(A) Wet Bulb Temperature
(B) Wind Chill Factor
(C) UV Index
(D) Dew Point

120. Consider the following characteristics of a cloudburst:
I. It is highly localized.

Click Here to Buy book on Amazon

II. It is characterized by sudden and extreme rainfall.
III. It usually occurs during the winter months in India.
IV. It is associated with towering cumulonimbus clouds.
V. It can be easily and precisely predicted days in advance.

Which of the statements given above are correct?
(A) I, II, and IV only
(B) II, III, and V only
(C) I, II, IV, and V only
(D) I, III, and IV only

121. How do "impervious surfaces" (like concrete roads and pavements) contribute to urban flooding?
(A) Preventing soil infiltration and drastically increasing surface runoff
(B) Rapid absorption of water causing regional underground pipelines to burst
(C) Chemical reactions with rainwater that form physical blockages in drains
(D) Attracting more cyclonic cloud formations due to their high surface albedo

122. The standard Disaster Management Cycle is divided into three distinct phases. Which of the following activities belongs to the "Pre-disaster" phase?
(A) Search and Rescue
(B) Reconstruction of damaged infrastructure
(C) Distribution of relief materials
(D) Risk assessment and mitigation planning

123. The Sendai Framework is the successor instrument to which previous international disaster risk reduction framework?
(A) Kyoto Protocol
(B) Yokohama Strategy
(C) Hyogo Framework for Action
(D) Geneva Convention

124. Lightning strikes have emerged as one of the leading causes of death by natural hazards in India. Lightning is fundamentally a massive discharge of electricity that occurs due to charge separation within:
(A) Stratus clouds
(B) Cumulonimbus clouds
(C) Cirrus clouds
(D) Nimbostratus clouds

125. The concept of "Community-Based Disaster Management" (CBDM) emphasizes:
(A) Excluding local populations from technical disaster planning processes to ensure accuracy
(B) Deploying only central paramilitary forces to manage all regional and local relief camps
(C) Empowering local communities to identify, analyze, and reduce their own disaster risks
(D) Relying entirely on international NGOs for all aspects of ground-level disaster response

126. In alignment with the Sendai Framework, India released its first comprehensive National Disaster Management Plan in the year:
(A) 2005
(B) 2012
(C) 2016
(D) 2021

127. The 2015 Chennai floods highlighted the severe impact of which specific factor on urban flood vulnerability?
(A) Tsunami waves completely overwhelming the existing coastal defense systems
(B) Encroachment of lakes and floodplains for real estate development
(C) Massive collapse of multiple large-scale hydroelectric dams located upstream
(D) Sudden and unexpected melting of nearby high-altitude glaciers

128. Urban flooding has emerged as a major distinct disaster in Indian cities. Which of the following is the most significant anthropogenic cause of urban floods?
(A) Exceptional and frequent tectonic shifting occurring beneath major urban centers
(B) Over-extraction of groundwater resources causing significant and rapid soil subsidence
(C) Excessive watering of urban parks and established green belts during the monsoon
(D) Unplanned urbanization causing the loss of natural drainage systems and wetlands

129. Most fatalities due to lightning strikes in India occur predominantly among which demographic?
(A) Farmers and agricultural laborers working

Downloaded from www.pdf.tube

in open fields
(B) Urban office workers commuting during monsoon
(C) Fishermen operating deep-sea trainers
(D) Residents of high-rise apartment buildings

130. What is the fundamental difference between disaster "Mitigation" and "Preparedness"?
(A) Preparedness focuses exclusively on the administrative readiness to respond once a disaster occurs.
(B) Mitigation reduces physical impact, while preparedness focuses on response readiness.
(C) Mitigation involves large-scale international aid, while preparedness relies on local municipal funds.
(D) There is no functional difference as the terms are used interchangeably within the DM Act.

NODIA

ANSWERS

1. (A) P-3, Q-4, R-1, S-2
Greenhouse gas sources vary based on human and natural processes. Carbon dioxide primarily originates from fossil fuel combustion for energy. Methane emissions are heavily linked to wetlands and livestock enteric fermentation. Nitrous oxide is largely a byproduct of agricultural soil management. Chlorofluorocarbons are synthetic chemicals specifically used in industrial applications such as refrigerants and aerosols.

2. (C) It has led to longer dry spells interspersed with short periods of heavy rainfall.
Global warming significantly impacts the Indian Summer Monsoon by altering the atmospheric moisture dynamics. This results in a notable change in precipitation distribution, characterized by prolonged dry periods without rain. These spells are increasingly interrupted by brief episodes of exceptionally intense and heavy rainfall. This erratic behavior complicates agricultural planning and water resource management.

3. (B) Statement I is incorrect but Statement II is correct
Scientific evidence demonstrates that global climate patterns are influenced by a combination of factors. While human activities like burning fossil fuels are the dominant drivers today, natural phenomena have historically shaped the climate. Occurrences such as massive volcanic eruptions and periodic fluctuations in solar radiation continue to contribute to environmental changes observed over very long geological periods.

4. (A) II, III, IV, I
The geographical distribution of major Himalayan glaciers follows a specific longitudinal progression across the mountain range. Moving from the western frontier toward the east, the Siachen Glacier is encountered first in the Karakoram. This is followed by the Gangotri and Milam glaciers in the central Himalayas. Finally, the Zemu glacier is located further east within the Sikkim region.

5. (B) Assessing and reviewing global scientific, technical, and socio-economic information related to climate change
The Intergovernmental Panel on Climate Change serves as an international scientific body tasked with a specific mandate. Rather than conducting original laboratory or field research, it focuses on the comprehensive assessment of existing peer-reviewed literature. This process involves evaluating technical and socio-economic data to provide policymakers with a clear, objective understanding of climate change and its impacts.

6. (B) Saltwater intrusion into coastal aquifers and fertile deltaic farmlands
Rising ocean levels present a severe challenge to the agricultural stability of low-lying coastal states. As the sea encroaches upon land, saltwater penetrates deep into the freshwater aquifers and the porous soils of river deltas. This process increases soil salinity to levels that are toxic to traditional crops, leading to significant reductions in agricultural productivity and biodiversity.

7. (B) Sustained shifts in global weather patterns and temperatures resulting from human-induced activities
Distinguishing climate change from natural variability requires looking at long-term trends rather than seasonal fluctuations. While natural variability involves temporary cycles like ocean currents, climate change refers to permanent, sustained shifts in global temperatures and atmospheric composition. Modern climate change is fundamentally characterized by the impact of human activities, such as deforestation and the emission of greenhouse gases.

8. (B) The Hindu Kush Himalayas
Different regions of the Indian subcontinent exhibit varying levels of sensitivity to global warming. High-altitude mountain ecosystems are particularly vulnerable because they experience warming at a rate significantly faster than the global average. Under high-emission scenarios, the Hindu Kush Himalayan region is projected to undergo the most intense temperature increases,

Click Here to Buy book on Amazon

leading to rapid glacial melt and ecological disruption.

9. (B) Ganga River Basin
The Gangotri Glacier serves as the primary source for the Bhagirathi River, which is a major headstream of the Ganges. The ongoing rapid retreat of this massive ice body directly threatens the perennial nature of the river system. Because millions of people rely on this basin for drinking water and agriculture, glacial loss poses a long-term water security threat.

10. (C) Troposphere
The greenhouse effect functions by trapping heat within the lowest layer of the Earth's atmosphere. Greenhouse gases absorb infrared radiation emitted from the surface and re-radiate it back, causing the troposphere to warm significantly. While higher layers like the stratosphere may actually cool due to this process, the maximum warming is concentrated where these gases are most dense.

11. (C) Low-lying coral atolls
The physical structure of islands determines their resilience to rising sea levels. The Lakshadweep archipelago consists of small coral atolls that sit only a few meters above the current sea level. Unlike high-altitude volcanic islands, these low-lying landforms lack the elevation necessary to withstand even minor increases in ocean height, making them exceptionally vulnerable to total submergence.

12. (C) Its concentration in the atmosphere is directly controlled by human industrial emissions.
Water vapor is the most prevalent greenhouse gas and plays a vital role in Earth's energy balance. However, its presence in the atmosphere is not a direct result of industrial output. Instead, it is governed by air temperature through the process of evaporation. Warmer air holds more moisture, creating a feedback loop that amplifies the warming effect initially triggered.

13. (C) I, II, and IV only
Climate change projections for India indicate several major environmental shifts. There is a confirmed trend toward more frequent extreme rainfall events and the expansion of arid zones in the northwest. Additionally, rising temperatures increase heat stress, which negatively affects the health and labor productivity of outdoor workers. However, the overall frequency of tropical cyclones in the North Indian Ocean has generally not increased.

14. (C) Increased frequency of extreme heatwaves and erratic monsoon precipitation
Recent international assessments highlight that the Indian subcontinent faces specific, acute climate risks. The most prominent threats include a substantial rise in the intensity and duration of extreme heatwaves during the summer. Simultaneously, the region is experiencing highly erratic monsoon cycles, characterized by unpredictable timing and a shift toward more extreme rainfall events rather than steady, uniform precipitation.

15. (D) Mumbai
High-density coastal cities face immense financial risks as sea levels continue to rise. Mumbai is particularly vulnerable because a large portion of its critical infrastructure and high-value real estate is built on reclaimed land at low elevations. Consequently, it is projected to suffer the highest economic losses in India due to frequent flooding, storm surges, and permanent coastal inundation.

16. (A) The El Nino Southern Oscillation (ENSO) cycle
Natural climate variability encompasses fluctuations that occur within the Earth's climate system without direct human influence. A classic example is the periodic cycle involving changes in sea surface temperatures in the central and eastern Pacific Ocean. These shifts affect global weather patterns and rainfall in India, representing a natural phenomenon that has occurred for millennia independently of industrial activity.

NODIA

17. (A) Initial increase in river flow and floods followed by long-term water scarcity
The melting of Himalayan glaciers has complex consequences for northern India's river systems. Initially, the rapid melting leads to a higher volume of water entering the rivers, which increases the risk of severe seasonal floods. However, as the total volume of glacial ice diminishes over

time, the sustained summer flow will eventually decline, leading to permanent water scarcity.

18. (A) Greenhouse gas absorption and re-emission of outgoing terrestrial infrared radiation
The enhanced greenhouse effect is a thermodynamic process driven by atmospheric composition. The Earth's surface absorbs solar energy and radiates it back toward space as longwave infrared radiation. Certain gases in the atmosphere capture this outgoing energy and re-emit it in all directions, including back toward the surface. This process effectively traps heat and causes the global temperature to rise.

19. (D) Frequent intense rainfall causing flash floods in the Narmada and Tapti river basins
Central India has observed significant changes in weather extremes due to shifting climatic conditions. In Madhya Pradesh, this is manifested as an increase in the intensity of individual rainfall events. This trend often leads to sudden flash floods within major river systems like the Narmada and Tapti. These events occur even if the total seasonal rainfall remains relatively close to normal.

20. (B) 0.7 degrees Celsius
Official climate reports indicate a clear warming trend over the Indian landmass during the last century. From nineteen hundred and one to twenty eighteen, the average surface temperature in India rose by approximately zero point seven degrees Celsius. This warming is primarily attributed to the increased concentration of greenhouse gases in the atmosphere, leading to more frequent heatwaves and erratic weather.

21. (D) Widespread coral bleaching and loss of reef-associated biodiversity
Rising ocean temperatures pose a direct biological threat to marine ecosystems around the Andaman Islands. Corals exist in a delicate symbiotic relationship with algae; however, thermal stress causes them to expel these organisms. This results in bleaching, where the coral loses its color and primary energy source. If temperatures remain high, entire reef systems may die, destroying critical marine habitats.

22. (B) Enteric fermentation in livestock and wetland rice cultivation
Methane is a high-potency greenhouse gas with significant sources related to agricultural practices in India. The largest contribution comes from enteric fermentation, a natural digestive process in cattle and other livestock. Additionally, the anaerobic conditions in flooded rice paddies facilitate the production of methane by specialized bacteria. Together, these sectors represent the primary anthropogenic sources of methane emissions nationally.

23. (D) United Nations Environment Programme (UNEP) and World Meteorological Organization (WMO)
In nineteen eighty-eight, two major international organizations collaborated to create a formal body for climate science assessment. The United Nations Environment Programme and the World Meteorological Organization established this entity to provide the world with a clear scientific view of the current state of knowledge in climate change. It continues to be the most authoritative source for global climate information today.

24. (D) Karakoram Range
The Siachen Glacier is one of the longest mountain glaciers in the world and is situated in a highly sensitive geopolitical and environmental zone. It is located within the Karakoram Range, which lies to the north of the main Himalayan chain. The glacier is currently under stress from both rising global temperatures and the localized environmental impacts of long-term military presence.

25. (B) Rising minimum temperatures occurring at a faster rate than maximum temperatures
Climate data from the Indian subcontinent reveals a specific asymmetry in how temperatures are increasing. While both daytime and nighttime temperatures are rising, the minimum temperatures recorded at night are increasing more rapidly than the maximum daytime temperatures. This trend reduces the diurnal temperature range and has significant implications for human health, agricultural yields, and the local ecological balance.

Downloaded from www.pdf.tube

26. (D) Nitrous oxide
Global Warming Potential measures how much energy the emissions of one ton of a gas will absorb over a given period, relative to carbon dioxide. Among the common gases listed, nitrous oxide has a significantly higher capacity to trap heat than both carbon dioxide and methane over a century. Its long atmospheric lifetime and high efficiency make it a powerful warming agent.

27. (A) Thermal expansion of ocean water and the melting of land-based ice masses
Global sea level rise is primarily driven by two physical mechanisms related to rising temperatures. As ocean water warms, it undergoes thermal expansion, causing it to take up more volume. Simultaneously, the melting of glaciers and polar ice sheets adds new water to the oceans. These combined factors are responsible for the encroaching sea levels currently threatening India's vast coastal regions.

28. (B) Both A and R are true but R is not the correct explanation of A.
The Earth maintains an energy balance by radiating infrared energy back into space. This is a fundamental physical property of all warm bodies. Separately, greenhouse gases have a molecular structure that allows shortwave solar radiation to pass through but traps longwave terrestrial radiation. While both statements are scientifically accurate, the chemical properties of gases do not cause the Earth to radiate energy.

29. (C) A warming Indian Ocean tends to decrease the moisture-carrying capacity of the monsoon winds.
Thermodynamics dictates that warmer air can hold significantly more moisture than cooler air. Consequently, as the Indian Ocean warms, the atmosphere above it actually gains a higher capacity to carry water vapor. This leads to more intense rainfall events when the monsoon winds reach land. The other statements correctly describe the complexities and erratic nature of modern monsoon patterns in India.

30. (A) I and II only
The Intergovernmental Panel on Climate Change provides the scientific framework for global climate policy through its periodic Assessment Reports. These documents warn of significant risks if warming exceeds one point five degrees Celsius. However, the organization remains policy-neutral. It provides scientific data and potential scenarios but does not prescribe specific laws or mandate exact policies for individual sovereign nations like India.

31. (A) Statement I is correct but Statement II is incorrect
Rising temperatures and changing rainfall patterns are shifting the geographic boundaries where various agricultural pests can survive. Contrary to being slowed down, warmer conditions generally accelerate the metabolic and reproductive rates of most insect pests. This leads to more frequent outbreaks and the spread of diseases to new regions, posing a serious threat to food security and traditional farming practices.

32. (B) Reduce by 45%
In accordance with international climate agreements, India has committed to ambitious targets to reduce the carbon footprint of its economic growth. The updated Nationally Determined Contributions submitted in twenty twenty-two set a goal to reduce the emissions intensity of the country's Gross Domestic Product. The target is a forty-five percent reduction by twenty thirty, using two thousand and five as the baseline year.

33. (B) El Nino
The El Nino Southern Oscillation is a major driver of interannual climate variability in India. This phenomenon involves the abnormal warming of surface waters in the eastern tropical Pacific Ocean. For the Indian subcontinent, this atmospheric shift is traditionally associated with a weakening of the monsoon winds, leading to below-average rainfall, widespread drought conditions, and significant impacts on agricultural productivity.

34. (D) National Mission on Nuclear Energy
India's comprehensive climate strategy is organized into eight original specialized missions designed to address different aspects of sustainability. These include initiatives focused on solar energy, energy efficiency, water conservation, and sustainable agriculture. While nuclear power is part of India's broader energy mix, it was not established as one of the eight

NODIA

core pillars under the original National Action Plan on Climate Change.

35. (A) Expansion of the geographical range and transmission seasons of disease vectors
Warming temperatures and altered rainfall patterns create favorable conditions for disease-carrying insects like mosquitoes. These changes allow vectors to survive in higher altitudes and cooler regions that were previously unsuitable. Additionally, shorter winters extend the duration of the transmission season. This leads to an increased risk of diseases like malaria and dengue in areas that historically had low infection rates.

36. (B) 20%
The National Water Mission was established as a core component of India's climate action strategy to ensure sustainable water management. A primary objective of this mission is the conservation of water through the minimization of wastage. Specifically, the government set a target to improve water use efficiency by twenty percent across various sectors, including agriculture, industry, and domestic consumption.

37. (A) Enhanced glacial formation
Rising sea levels have several well-documented negative impacts on coastal island ecosystems. These include the physical erosion of shorelines, the submergence of low-lying coastal land, and the contamination of freshwater lenses by salt water. However, glacial formation is an arctic or high-altitude process related to freezing temperatures. It is not an impact of sea level rise on tropical or subtropical coastal islands.

38. (D) International law provides formal legal refugee status and protection explicitly for climate refugees under the 1951 Refugee Convention.
Millions of people are displaced by environmental disasters in India, including cyclones and riverbank erosion. Despite the growing scale of this crisis, current international law lacks a formal mechanism for protecting those forced to move due to climate change. The original nineteen fifty-one convention defines refugees based on persecution and conflict, not environmental factors, leaving climate-displaced populations without specific legal status.

39. (B) 2.5 to 3 billion tonnes of CO_2 equivalent
As part of its international climate pledges, India has committed to enhancing its natural carbon sequestration capacity. The goal is to create an additional carbon sink through massive afforestation and the expansion of tree cover across the country. By twenty thirty, India aims to sequester between two point five and three billion tonnes of carbon dioxide equivalent through these forestry initiatives.

40. (D) Coral expulsion of symbiotic zooxanthellae algae from their tissues under environmental stress
Coral reefs depend on a symbiotic relationship with microscopic algae that live within their tissues and provide nutrients. When ocean temperatures rise significantly, the coral becomes stressed and expels these algae. This causes the coral to lose its vibrant color and turn white. Without the algae, the coral is weakened and may eventually die if the stressful environmental conditions persist.

41. (B) UNFCCC → Kyoto Protocol → NAPCC → Paris Agreement
Global climate governance has evolved through several key milestones over the decades. The framework began with the creation of the United Nations Framework Convention on Climate Change in nineteen ninety-two. This was followed by the Kyoto Protocol in nineteen ninety-seven. India launched its domestic action plan in two thousand eight, and the global Paris Agreement was later adopted in twenty fifteen.

42. (C) Wheat
Wheat is a temperature-sensitive crop that requires a specific cooling period during its growth cycle in northern India. Rising winter temperatures and the early onset of summer heat can significantly shorten the grain-filling stage. This thermal stress leads to shriveled grains and reduced yields. Consequently, wheat production is considered highly vulnerable to the warming trends projected for the coming decades.

43. (A) P-4, Q-2, R-1, S-3
International climate efforts are defined by specific mechanisms and goals. The Paris Agreement focuses on limiting global warming to well below two degrees. The Kyoto Protocol historically set

Click Here to Buy book on Amazon

binding targets for developed countries only. Nationally Determined Contributions represent the self-defined pledges made by each country. Net Zero refers to achieving a balance between the greenhouse gases emitted and those removed from the atmosphere.

44. (D) Chikungunya - Aedes aegypti
Climate change facilitates the spread of certain diseases by expanding the habitat of their carriers. The Aedes aegypti mosquito is the primary vector for both dengue and chikungunya. As temperatures rise, this mosquito can thrive in new urban and rural environments across India. Accurate matching of diseases to their vectors is essential for public health planning and implementing effective vector control strategies.

45. (B) 100 GW
India significantly increased its renewable energy ambitions to address growing power demands sustainably. The original twenty gigawatt target for solar power, established under the National Solar Mission, was deemed insufficient given the country's potential. Consequently, the government revised this goal to one hundred gigawatts by twenty twenty-two. This expansion aimed to reduce reliance on coal and meet international climate commitments.

46. (B) Multi-day extreme rainfall events
Meteorological records from central India show a clear trend toward more intense precipitation patterns. While the total seasonal rainfall may not change drastically, the frequency of extreme events lasting several days has increased exponentially. These heavy downpours often exceed the drainage capacity of the land, leading to widespread flooding and crop damage, even in regions that were historically considered less flood-prone.

47. (B) Eight
The National Action Plan on Climate Change serves as the primary policy framework for India's climate mitigation and adaptation efforts. This plan is built upon eight core national missions that represent multi-pronged strategies. These missions cover diverse areas including solar energy, water, agriculture, and the Himalayan ecosystem. This structured approach allows the government to coordinate specialized efforts across different sectors of the economy.

48. (B) Cultivation zones shifting to higher altitudes due to a lack of winter chilling hours
Apple trees require a specific number of cold hours during winter to ensure proper flowering and fruit development. As temperatures in Himachal Pradesh rise, lower-altitude orchards no longer receive sufficient chilling. Consequently, farmers are forced to move apple cultivation to higher, cooler elevations. This shift disrupts traditional livelihoods and poses challenges for land use and infrastructure development in mountainous regions.

49. (C) 50%
India has updated its international climate targets to reflect a stronger commitment to renewable energy transition. A key goal in the updated Nationally Determined Contributions is to ensure that half of the country's total electric power installed capacity comes from non-fossil fuel sources by twenty thirty. This ambitious target supports India's long-term objective of achieving energy security while significantly reducing carbon emissions.

NODIA

50. (C) Individuals who are forced to flee their home region due to sudden or long-term changes to their local environment
Environmental displacement occurs when changes in the local habitat make it impossible for populations to sustain their lives or livelihoods. These changes can be sudden, like a severe cyclone, or gradual, such as rising sea levels or persistent drought. Individuals forced to relocate under these circumstances are often referred to as climate refugees, highlighting the human cost of global environmental shifts.

51. (D) Department of Science and Technology (DST)
Sustaining the Himalayan ecosystem requires specialized scientific coordination due to its unique geological and ecological sensitivity. The Department of Science and Technology is the designated lead institution for this specific national mission. It coordinates research, monitoring, and policy recommendations to protect glaciers and biodiversity, ensuring that developmental activities in the region remain sustainable in the face of climate change.

52. (D) The potential increase in photosynthesis and crop yields due to higher atmospheric CO_2 concentrations
Plants use carbon dioxide as a primary raw material for photosynthesis. Some scientific theories suggest that higher concentrations of this gas in the atmosphere could theoretically stimulate faster plant growth and increase agricultural yields. This phenomenon is known as the carbon fertilization effect. However, these gains are often offset by the negative impacts of rising temperatures and shifting rainfall patterns.

53. (A) I, II, III, and V only
Coral bleaching is triggered by multiple environmental stressors that disrupt the health of reef ecosystems. The most significant factor is the rise in sea surface temperatures. Other contributors include ocean acidification, which weakens coral structures, and excessive solar radiation. Localized coastal pollution also adds stress to the corals. Sea level rise generally does not cause bleaching, though it affects coral growth.

54. (B) 2008
Recognizing the urgent need for a structured response to global warming, the Government of India launched its first comprehensive domestic climate policy in two thousand eight. This National Action Plan on Climate Change introduced a multi-sectoral approach through eight specialized missions. It remains the foundational document for coordinating climate adaptation and mitigation efforts between the central and state governments across India.

55. (A) Sundarbans Delta
The Sundarbans region is characterized by a fragile network of low-lying islands that are highly susceptible to erosion and rising sea levels. Islands such as Ghoramara are rapidly losing land area to the encroaching sea, forcing thousands of residents to abandon their homes. This has created a significant population of internally displaced people who are often categorized as climate refugees.

56. (A) Intense short-duration rainfall events causing significant urban flooding
A fundamental principle of atmospheric science is that warmer air can hold a greater volume of water vapor. This increased moisture capacity leads to more energy in the atmosphere, which frequently manifests as sudden, extremely intense rainfall. In India, this trend is directly linked to the rising frequency of flash floods in urban areas, where drainage systems cannot handle such high volumes.

57. (C) III only
The National Action Plan on Climate Change is composed of eight specific missions designed to address environmental challenges. While the Green India mission focuses on forests and the Sustainable Agriculture mission targets food security, there is no mission dedicated specifically to oceanic biodiversity within the original eight. Each mission is managed by a different government department to ensure specialized implementation.

58. (A) Gulf of Mannar and Lakshadweep
Reef ecosystems in India have suffered significant damage during recent global thermal events. The Gulf of Mannar and the Lakshadweep archipelago have recorded the most severe instances of mass coral bleaching due to elevated sea surface temperatures. These regions are critical biodiversity hotspots, and the loss of coral health has devastating consequences for marine life and the local fishing communities.

NODIA

59. (C) 2070
During the international climate summit held in Glasgow, India announced a significant long-term commitment to environmental sustainability. The country pledged to reach net-zero emissions by the year twenty seventy. This target requires a massive transformation of the national energy system, including a shift toward renewable power, increased energy efficiency, and the implementation of carbon removal technologies over the coming decades.

60. (B) The high-altitude regions of the Himalayas
Rising global temperatures are altering the ecological limits of disease-carrying insects. In India, the warming of high-altitude Himalayan regions has made these areas habitable for mosquitoes that carry malaria and dengue. Previously, these regions were too cold for the vectors to survive. This expansion of the disease

range presents a new and significant public health challenge for mountain communities.

61. (B) Zones II and III
The seismic zonation map of India categorizes regions based on their historical earthquake activity and geological risk. Most of Madhya Pradesh is situated in areas of low to moderate seismic intensity. Specifically, the state primarily falls within Zone Two and Zone Three. This indicates that while major earthquakes are less frequent than in the Himalayas, the region still requires seismic-resistant construction.

62. (A) Hard granitic terrain with low rock porosity
The Bundelkhand region faces chronic water scarcity due to its unique geological composition. The landscape is dominated by dense, hard granitic rocks that do not allow water to easily penetrate or be stored underground. This lack of natural rock porosity means that rainwater runs off quickly rather than recharging aquifers, leaving the region with limited groundwater resources for agriculture and drinking.

63. (A) Locust swarm attack on crops
Biological hazards refer to threats caused by living organisms that can lead to disease, death, or economic disruption. A locust swarm is a classic example of a biological disaster, as these insects can rapidly consume vast areas of vegetation and crops. This differs from technological hazards like gas leaks or geological hazards like earthquakes, which involve non-living physical or chemical processes.

64. (C) The Bay of Bengal experiencing significantly more cyclones than the Arabian Sea
Statistical data on tropical storms in the North Indian Ocean shows a clear geographical disparity. Historically, the Bay of Bengal witnesses a much higher frequency of cyclonic events compared to the Arabian Sea. This difference is attributed to higher sea surface temperatures and the influx of low-pressure systems from the Pacific Ocean, which sustain and intensify storms more frequently in the east.

65. (A) III, II, I, IV
India has experienced several devastating earthquakes over the past few decades. Following the chronological timeline, the Uttarkashi earthquake occurred in nineteen ninety-one. This was followed by the Latur disaster in nineteen ninety-three. The massive Bhuj earthquake struck on Republic Day in two thousand one. Most recently among these, the Sikkim earthquake occurred in the year twenty eleven, impacting the eastern Himalayas.

66. (B) Pre-monsoon (April-May) and Post-monsoon (October-November)
Tropical cyclones in the North Indian Ocean primarily occur during two distinct peak seasons. These coincide with the periods when sea surface temperatures are highest and atmospheric conditions are most favorable for storm development. The first peak happens during the pre-monsoon months of April and May. The second, often more intense peak, occurs during the post-monsoon months of October and November.

67. (C) Earthquake
Disaster management professionals classify hazards based on their primary cause or origin. Geological hazards are those resulting from internal Earth processes or movements of the crust. Earthquakes are the most prominent example of this category, along with landslides and tsunamis. In contrast, cyclones and droughts are meteorological in nature, while epidemics are biological threats caused by pathogens and viruses.

68. (B) Flood plain zoning and regulation
Flood management strategies are divided into structural and non-structural measures. Structural measures involve physical constructions like dams or embankments. Non-structural measures focus on policy and planning to reduce exposure. Flood plain zoning is a key non-structural tool; it regulates land use in vulnerable areas to prevent high-value development where flooding is likely to occur, thereby minimizing potential economic loss.

69. (A) Calm conditions with clear skies and low pressure
The center of a mature tropical cyclone is a unique meteorological feature known as the eye. While the surrounding eyewall contains the most destructive winds and heaviest rains, the eye itself is a zone of relative tranquility. It is characterized

Downloaded from www.pdf.tube

by sinking air, which suppresses cloud formation and leads to calm winds, clear skies, and the lowest atmospheric pressure in the system.

70. (C) 2001
One of the most destructive seismic events in modern Indian history occurred in the Kutch district of Gujarat. The Bhuj earthquake struck on the morning of January twenty-sixth, two thousand one, coinciding with India's Republic Day celebrations. The disaster caused widespread loss of life and massive infrastructure damage, leading to a fundamental shift in how India approaches earthquake engineering and disaster response.

71. (A) Arabian Sea
Cyclone Tauktae was a powerful tropical storm that developed during the pre-monsoon season of twenty twenty-one. It originated in the Arabian Sea and moved northward along India's western coast, bringing heavy rain and high winds to Kerala, Karnataka, and Maharashtra before making landfall in Gujarat. This event highlighted the increasing trend of high-intensity cyclones forming within the Arabian Sea basin.

72. (B) Four
The Bureau of Indian Standards provides a scientific classification of the country's seismic risk through a zonation map. Currently, India is divided into four distinct seismic zones, numbered Two through Five. Zone One is no longer used, as all parts of the country are considered to have some level of risk. Zone Five represents the highest danger, while Zone Two indicates the lowest risk.

73. (D) Heavy reliance on water-intensive cash crops without assured irrigation facilities
The agricultural crisis in the Vidarbha region of Maharashtra is deeply linked to crop choices and water availability. Farmers in this semi-arid area often cultivate water-demanding crops like cotton and soybean. Because many areas lack reliable irrigation infrastructure, they depend entirely on erratic monsoon rains. When rainfall fails, these water-intensive crops perish, leading to severe economic distress and recurring cycles of agricultural drought.

74. (C) Brahmaputra
The Brahmaputra River is characterized by its massive volume and high sediment load as it flows through the valley of Assam. During the monsoon season, the river frequently breaches its banks, causing widespread inundation and destroying homes and agriculture. Because of the regular and devastating nature of these seasonal floods, the river is often referred to as the sorrow of the state.

75. (D) Higher sea surface temperatures and stratification that prevents water mixing
The Bay of Bengal is naturally more conducive to cyclone formation than the Arabian Sea. Its waters are generally warmer, providing more energy for storm development. Furthermore, the high influx of freshwater from major rivers creates a layer of low-salinity water at the surface. This stratification prevents deeper, cooler water from mixing upwards, allowing the surface to remain hot enough to sustain cyclones.

76. (D) Cloudburst
Hydro-meteorological hazards are extreme events triggered by atmospheric and hydrological conditions. A cloudburst is a prime example, involving sudden and extreme precipitation that often leads to flash floods. Unlike volcanic eruptions which are geological, or pest infestations which are biological, cloudbursts are purely driven by weather processes. Understanding these classifications is essential for developing targeted disaster mitigation and response strategies.

77. (A) Both A and R are true and R is the correct explanation of A.
The formation of a tropical cyclone requires a rotating motion that is initiated by the Coriolis force. This physical force is a result of the Earth's rotation and its strength is dependent on latitude. At the equator, the Coriolis force is non-existent, which means that air cannot spiral into a low-pressure center to form a vortex. Consequently, cyclones never develop at the equator.

NODIA

78. (B) I, II, and IV only
India's seismic zonation map highlights areas of varying risk. Zone Five represents the highest danger, while Zone Two is the lowest. Delhi is notably situated in Zone Four, indicating high

vulnerability. The current official classification has eliminated Zone One. However, the statement about the Andaman and Nicobar Islands is incorrect; they are actually located in the most dangerous category, Zone Five.

79. (A) P-3, Q-1, R-2, S-4
Different regions in India face drought due to distinct geographical and socio-economic factors. Western Rajasthan is defined by extreme aridity and minimal rainfall. Bundelkhand suffers from hard rock terrain that limits groundwater. Vidarbha's distress is closely tied to cotton cultivation vulnerabilities. Rayalaseema is located in the rain shadow of the Eastern Ghats, which naturally restricts the amount of precipitation the region receives.

80. (D) Flooding in this region occurs exclusively during the winter monsoon.
The flood-prone plains of Uttar Pradesh receive the vast majority of their rainfall during the Southwest Monsoon between June and September. These floods are primarily caused by Himalayan rivers that carry massive amounts of water and silt. While eastern regions are more vulnerable due to topography, the suggestion that flooding occurs only in winter is factually incorrect, as winter rains are minimal.

81. (C) Odisha
Cyclone Fani was one of the most powerful tropical storms to hit the eastern coast of India in recent decades. It reached the status of an extremely severe cyclonic storm before making landfall near Puri. While it affected multiple regions, the state of Odisha bore the brunt of the impact, suffering extensive damage to infrastructure, electricity networks, and the local agricultural economy.

82. (A) North-Eastern India
Seismic Zone Five is designated for regions with the highest risk of experiencing high-intensity earthquakes. Most of North-Eastern India, including the seven sister states, falls into this category due to its location at the collision boundary of the Indian and Eurasian tectonic plates. This makes the region exceptionally prone to frequent and severe seismic activity, necessitating strict adherence to earthquake-resistant building codes.

83. (D) Subduction and collision of the Indian plate under the Eurasian plate
The Himalayas are a tectonically active mountain range formed by the ongoing collision of two massive continental plates. The Indian plate is slowly moving northward and subducting beneath the Eurasian plate. This continuous pressure creates immense geological stress, which is periodically released through earthquakes. The nineteen ninety-one Uttarkashi earthquake was a direct result of this collision and the associated fault movements in the region.

84. (C) Counter-clockwise
The rotation of the Earth creates the Coriolis force, which deflects moving air to the right in the Northern Hemisphere. When air rushes toward a low-pressure center to form a cyclone, this deflection causes the wind to spiral in a counter-clockwise direction. In the Southern Hemisphere, the force acts in the opposite direction, causing cyclones to rotate clockwise around their center.

85. (C) Meteorological drought
Droughts are classified based on which part of the water cycle is affected. A meteorological drought occurs when there is a significant and prolonged deficit in precipitation compared to the long-term average for a region. Western Rajasthan, characterized by its arid climate and naturally low rainfall, frequently experiences this type of drought as the primary driver for subsequent hydrological and agricultural water shortages.

86. (A) P-2, Q-4, R-1, S-3
Hazards are categorized by their origin to facilitate better planning and response. Landslides are primarily geological events involving earth movement. Heat waves are hydro-meteorological, driven by atmospheric conditions. The COVID-19 pandemic is a biological disaster caused by a viral pathogen. Industrial chemical leaks are classified as anthropogenic or technological hazards because they result from human error or failure in man-made systems.

87. (B) Increased Arabian Sea cyclone frequency with decreased Bay of Bengal intensity
Climate change is altering the historical patterns of tropical storms in the North Indian Ocean. Recent studies indicate that the Arabian Sea is witnessing a significant increase in both the

Click Here to Buy book on Amazon

frequency and intensity of cyclones. This shift is linked to rising sea surface temperatures in the western Indian Ocean. Meanwhile, the Bay of Bengal continues to see many storms, though some trends suggest changes in their intensity.

88. (B) Occurrence in a stable continental region previously considered seismically safe
The nineteen ninety-three Latur earthquake was a major scientific event because it occurred in the Deccan Plateau. This region was historically regarded as a stable continental shield with very low seismic risk. The occurrence of a high-magnitude earthquake in such a zone challenged existing geological theories and forced a comprehensive re-evaluation of the seismic zonation and building safety standards across central India.

89. (B) Strong vertical wind shear
Tropical cyclones require specific environmental conditions to form and maintain their structure. High sea surface temperatures provide the necessary energy, and the Coriolis force is required to initiate rotation. However, strong vertical wind shear—the change in wind speed or direction with height—is actually detrimental to cyclones, as it disrupts the vertical structure of the storm and prevents it from intensifying.

90. (A) Kosi
The Kosi River is often referred to as the sorrow of Bihar because of its unpredictable nature and frequent flooding. Originating in the high Himalayas of Nepal, the river carries an enormous load of sediment. As it reaches the flat plains of North Bihar, the water slows down and deposits silt, causing the river to frequently change its course and inundate vast agricultural lands.

91. (B) Cyclone Watch → Cyclone Alert → Cyclone Warning → Post Landfall Outlook
The India Meteorological Department follows a standardized four-stage warning system to minimize the impact of tropical storms. It begins with a cyclone watch to monitor potential development. This is followed by a cyclone alert as a threat becomes more certain. A formal cyclone warning is issued closer to landfall. Finally, a post-landfall outlook provides information on the storm's behavior after moving inland.

92. (C) Heat retention by concrete and asphalt combined with a lack of vegetation
Urban areas often record significantly higher temperatures than surrounding rural landscapes. This is primarily because urban construction materials like concrete and asphalt absorb and store a massive amount of solar heat during the day. Additionally, the lack of trees and vegetation reduces the cooling effect of evapotranspiration. This combination creates a localized dome of heat that intensifies the impact of heat waves.

93. (C) Global trade winds moving cyclonic systems from east to west toward land
The vulnerability of India's east coast to cyclones is largely a result of global atmospheric circulation. In the tropics, trade winds generally blow from east to west. This means that storms forming in the Bay of Bengal are naturally pushed toward the Indian coastline. In contrast, storms in the Arabian Sea are often steered away from the Indian coast toward the Arabian Peninsula.

94. (C) 2005
Following the catastrophic Indian Ocean Tsunami of two thousand four, the Government of India recognized the need for a formal disaster management framework. This led to the passage of the Disaster Management Act in two thousand five. This landmark legislation mandated the creation of the National Disaster Management Authority and similar bodies at the state and district levels to coordinate disaster prevention and response.

95. (B) Large water volumes rushing down steep gradients and carrying heavy debris
Cloudbursts are particularly dangerous in mountainous regions like the Himalayas. The sudden release of an enormous volume of water in a confined area causes it to rush down steep slopes with incredible force. As the water moves, it picks up rocks, soil, and trees, turning into a destructive debris flow. This combination of high-speed water and heavy material causes massive damage to downstream settlements.

96. (B) Ministry of Home Affairs
The National Disaster Response Force was created as a specialized multi-disciplinary body to provide expert assistance during natural and man-made disasters. Although it draws personnel

NODIA

from various paramilitary organizations, its overall administrative and operational control lies with the Ministry of Home Affairs. This ensures that the force can be rapidly deployed across the country under a unified command during emergencies.

97. (A) P-3, Q-1, R-2, S-4
Major cyclonic storms in India have historically impacted different states with varying degrees of severity. Cyclone Amphan caused massive destruction in West Bengal in twenty twenty. Cyclone Hudhud struck the coast of Andhra Pradesh near Visakhapatnam. Cyclone Phailin made a significant impact on Odisha, while Cyclone Tauktae primarily affected the western coast, with the most severe damage occurring in the state of Gujarat.

98. (A) Hyderabad (INCOIS)
The Indian Tsunami Early Warning Centre was established to provide timely alerts for potential tsunamis in the Indian Ocean. It is operated by the Indian National Centre for Ocean Information Services, which is located in Hyderabad. The center uses a network of seismic stations and sea-level gauges to detect undersea earthquakes and monitor wave movements, ensuring that coastal communities receive adequate warning.

99. (B) 10 degrees Celsius
The India Meteorological Department uses specific thermal criteria to declare a cold wave in the plains. One of the primary thresholds is that the minimum temperature must fall to ten degrees Celsius or lower. Additionally, the recorded temperature must be significantly below the normal average for that time of year. These events can have serious impacts on human health, livestock, and seasonal agriculture.

100. (B) Peak Southwest Monsoon season
Landslides in the Western Ghats are primarily triggered by intense and prolonged rainfall. During the peak of the Southwest Monsoon, the soil on steep mountain slopes becomes saturated with water. This increases the weight of the soil and reduces its stability, leading to sudden collapses. Most landslide events in states like Kerala, Karnataka, and Maharashtra are concentrated during the heavy rainfall months of July and August.

101. (A) Establishing a centralized global military force for disaster intervention
The Sendai Framework for Disaster Risk Reduction outlines four specific priorities for action to enhance global resilience. These include understanding disaster risk, strengthening risk governance, investing in resilience, and enhancing preparedness for effective response. While international cooperation is encouraged, the framework does not propose or mandate the creation of a centralized global military force, as disaster management remains primarily a national and local responsibility.

102. (A) Take action, extreme weather expected
The India Meteorological Department uses a four-stage color-coded system to communicate the severity of weather threats. A red warning is the highest level of alert, indicating that extreme weather conditions are imminent. When this warning is issued, residents and local authorities are advised to take immediate action to protect life and property, as the situation is expected to cause significant disruption and danger.

103. (C) 40 degrees Celsius
For the plains of India, a heat wave is officially declared when the maximum temperature at a station reaches at least forty degrees Celsius. In addition to this absolute threshold, the temperature must also be several degrees above the normal average for the region. If the temperature exceeds forty-five degrees Celsius, it is classified as a severe heat wave, regardless of the normal averages.

104. (D) Orographic lifting of moisture-laden clouds along steep mountain slopes
Cloudbursts in the Himalayan region are often the result of unique topographic interactions. When moisture-heavy clouds are forced upward by the steep mountain terrain, they undergo rapid cooling and condensation. This process, known as orographic lifting, can lead to the sudden and intense release of all stored moisture in a very short period. This concentration of rainfall in a small area leads to flash flooding.

105. (C) Chief Minister
The Disaster Management Act of two thousand five established a decentralized governance structure in India. Similar to the national level

Downloaded from www.pdf.tube

where the Prime Minister heads the NDMA, the State Disaster Management Authority is led by the Chief Minister of the respective state. This ensuring that the highest political authority in the state is directly responsible for coordinating disaster planning, mitigation, and emergency response efforts.

106. (B) Odisha
Due to its long coastline and geographical position along the Bay of Bengal, Odisha is exceptionally vulnerable to tropical cyclones. Over the past century, the state has historically recorded the highest number of fatalities and the most significant economic losses from these storms. This vulnerability has led the state to develop one of the most robust and successful disaster management systems in the world today.

107. (A) Western Disturbances
Cold waves in northern and western India during the winter months are closely linked to migratory low-pressure systems known as Western Disturbances. These systems originate in the Mediterranean region and move eastward. After they pass, they often leave behind clear skies and allow cold air from the Arctic or Siberian regions to flow into the Indian subcontinent, causing a sharp and sudden drop in temperatures.

108. (A) Tectonically active, fragile mountains combined with heavy seasonal rainfall
The Himalayan mountain range is geologically young and continues to rise due to active tectonic movements. This makes the terrain naturally fragile and prone to instability. When this inherent geological weakness is combined with the extreme rainfall received during the monsoon, the soil and rocks are easily dislodged. These natural factors are the primary reasons why the region experiences such a high frequency of landslides.

109. (D) North, Northwest, Central, and Eastern India
Heat waves are a major seasonal hazard in India, but their frequency is not uniform across the country. The core heat wave zone represents a broad geographic belt encompassing the northern, northwestern, central, and eastern parts of the nation. These regions experience the highest number of severe heat wave days annually due to their continental location, away from the moderating influence of the oceans.

NODIA

110. (C) Sumatra
The devastating tsunami that struck the Indian Ocean on December twenty-sixth, two thousand four, was triggered by a massive undersea earthquake. The epicenter was located off the western coast of northern Sumatra, Indonesia. The earthquake was caused by a sudden slip along the fault line where the Indian plate subducts under the Burma plate, displacing a massive volume of water and creating waves.

111. (C) 2015 - 2030
The Sendai Framework for Disaster Risk Reduction is a major international agreement adopted at the Third United Nations World Conference. It provides a fifteen-year roadmap for countries to reduce disaster risks and build resilience. Covering the period from twenty fifteen to twenty thirty, the framework emphasizes the importance of understanding risk and strengthening governance to prevent new risks and reduce existing ones globally.

112. (B) North Indian Ocean region
The India Meteorological Department serves as one of the six Regional Specialized Meteorological Centers in the world. In this capacity, it is responsible for monitoring and issuing official advisories and names for tropical cyclones that develop within the North Indian Ocean. This includes providing critical weather information to several neighboring countries, including Bangladesh, Myanmar, Thailand, Sri Lanka, Maldives, and others in the region.

113. (B) Greater than 100 mm per hour over a geographical area of approximately 20-30 sq. km.
Meteorological classification defines a cloudburst as a highly localized and intense precipitation event. For an event to be officially categorized this way, the rainfall intensity must exceed one hundred millimeters per hour over a specific geographical area, typically around twenty to thirty square kilometers. These occurrences are often associated with steep terrain that facilitates rapid moisture condensation and the development of cumulonimbus clouds.

114. (B) Destroying standing Rabi crops like mustard, gram, and potatoes
Cold waves and the associated frost present a significant threat to winter agriculture in India.

Many Rabi crops are highly sensitive to freezing temperatures, which can damage plant tissues and halt growth. Mustard, gram, and potatoes are particularly vulnerable. A single severe frost event can lead to widespread crop failure, resulting in immense financial losses for farmers and affecting the national food supply and prices.

115. (D) Its speed decreases, but its wave height increases significantly.
In the deep ocean, tsunamis travel at very high speeds with relatively small wave heights. However, as the waves enter the shallow waters near the coast, they undergo a process called shoaling. The friction with the sea floor causes the speed of the wave to decrease. As the back of the wave catches up to the front, the energy is compressed, causing the height to rise.

116. (D) Storm surges inundating low-lying coastal areas
While high winds and heavy rains cause significant damage during a cyclone, the greatest threat to human life is traditionally the storm surge. This is a massive wall of water pushed toward the shore by the storm's intense winds and low pressure. These surges can flood low-lying coastal regions in a matter of minutes, trapping residents and causing widespread drowning and total destruction of property.

117. (D) Prime Minister of India
The administrative framework for disaster management in India establishes a multi-tiered hierarchy. At the topmost level, the National Disaster Management Authority serves as the primary policy-making body. Under the provisions of the Disaster Management Act of two thousand five, the Prime Minister of India acts as the ex-officio Chairperson, overseeing national strategies for disaster prevention, mitigation, and emergency response to ensure high-level coordination.

118. (D) Unscientific road construction and slope cutting
Human activities often exacerbate the natural instability of hilly terrains. One of the most significant triggers for landslides in India is the construction of roads and buildings without proper geological assessments. Cutting into steep slopes without adequate retaining structures disrupts the natural balance of the hillside. When combined with heavy rainfall, these weakened areas are often the first to fail, causing destructive and preventable landslides.

119. (A) Wet Bulb Temperature
Standard thermometers measure the ambient air temperature, but this does not fully reflect the heat stress on the human body. The wet bulb temperature accounts for both heat and humidity. When humidity is high, sweat cannot evaporate effectively, preventing the body from cooling itself. A wet bulb temperature above thirty-five degrees Celsius is considered the limit of human survivability, making this a critical metric.

120. (A) I, II, and IV only
Cloudbursts are extreme weather phenomena characterized by several distinct features. They are highly localized events that involve a sudden and intense downpour. These events are almost always associated with the development of massive, towering cumulonimbus clouds. Contrary to some misconceptions, they typically occur during the monsoon rather than winter, and their precise location remains extremely difficult to predict with current meteorological technology.

121. (A) Preventing soil infiltration and drastically increasing surface runoff
Urbanization often involves replacing natural soil and vegetation with impervious materials like concrete and asphalt. In a natural landscape, much of the rainwater soaks into the ground. However, impervious surfaces prevent this infiltration. Consequently, during heavy rain, almost all the water becomes surface runoff. This massive volume of water quickly overwhelms urban drainage systems, leading to rapid and severe flooding in city streets.

122. (D) Risk assessment and mitigation planning
The disaster management cycle includes several stages that take place before a hazard strikes. These pre-disaster activities are focused on reducing long-term vulnerability. Risk assessment involves identifying potential threats and the populations at risk, while mitigation planning focuses on implementing measures to reduce the physical impact of those threats. These proactive steps are

Click Here to Buy book on Amazon

essential for building resilience and minimizing the need for emergency relief.

123. (C) Hyogo Framework for Action
International efforts to reduce disaster risk have evolved through several key agreements. The Sendai Framework, which was adopted in twenty fifteen, is the direct successor to the Hyogo Framework for Action. While the previous framework focused primarily on disaster response and management, the Sendai Framework shifted the global focus toward a more comprehensive approach of disaster risk reduction and the prevention of new risks.

124. (B) Cumulonimbus clouds
Lightning is a powerful natural electrical discharge that occurs during thunderstorms. It is caused by the separation of positive and negative electrical charges within large, turbulent clouds. These clouds, known as cumulonimbus, are characterized by their massive vertical extent and strong internal updrafts. When the electrical difference between the cloud and the ground becomes too great, a bolt of lightning occurs to neutralize the charge.

125. (C) Empowering local communities to identify, analyze, and reduce their own disaster risks
Community-based disaster management is a strategy that recognizes that local residents are the first responders when a disaster occurs. This approach focuses on training and empowering communities to understand their own local hazards and develop their own response plans. By involving local people in the planning process, disaster management becomes more effective, culturally appropriate, and sustainable, as it utilizes traditional knowledge and local resources.

126. (C) 2016
In twenty sixteen, India reached a major milestone by releasing its first comprehensive National Disaster Management Plan. This plan was designed to align the country's disaster management strategies with the global goals set by the Sendai Framework. It provides a detailed framework for government agencies at all levels to coordinate their efforts in risk reduction, response, and the concept of building back better after a disaster.

127. (B) Encroachment of lakes and floodplains for real estate development
The catastrophic flooding in Chennai in twenty fifteen was a clear example of how unplanned urban growth increases disaster risk. Rapid real estate development led to the construction of buildings on natural floodplains and the filling of ancient lakes and wetlands. These natural features previously acted as sponges, absorbing excess rainwater. Without them, the extreme rainfall had nowhere to go, resulting in widespread inundation of the city.

128. (D) Unplanned urbanization causing the loss of natural drainage systems and wetlands
Urban flooding is increasingly recognized as a distinct disaster caused primarily by human activities. As cities expand rapidly, natural drainage channels are often blocked or paved over, and vital wetlands are reclaimed for construction. This destruction of the natural hydrological system leaves no room for rainwater to flow or be stored. Consequently, even moderate rainfall can lead to severe flooding in modern, densely populated urban environments.

129. (A) Farmers and agricultural laborers working in open fields
Lightning strikes are a major natural hazard in India, with the highest number of casualties occurring in rural areas. Farmers and agricultural laborers are the most vulnerable group because their work frequently requires them to be in open fields during the monsoon season. In these flat, open landscapes, individuals often become the tallest objects in the vicinity, significantly increasing their risk of being struck by lightning.

130. (B) Mitigation reduces physical impact, while preparedness focuses on response readiness.
Disaster management involves distinct stages aimed at reducing overall vulnerability. Mitigation refers to long-term measures designed to minimize the physical impact of hazards, such as building stronger infrastructure or zoning regulations. In contrast, preparedness focuses specifically on the administrative and operational readiness of teams to respond effectively to an event once it has already occurred or is imminent, ensuring a quick and efficient recovery.

Downloaded from www.pdf.tube

CHAPTER 05

Natural Resources : Forests, Minerals and Water

1. How does the Forest Survey of India define Very Dense Forests (VDF)?
(A) Lands with tree canopy density of 40 percent and above
(B) Lands with tree canopy density of 70 percent and above
(C) Lands with tree canopy density between 10 percent and 40 percent
(D) Lands with tree canopy density of 100 percent

2. Thorn and scrub forests are predominantly found in areas receiving annual rainfall of:
(A) Less than 50 cm
(B) 70 cm to 100 cm
(C) 100 cm to 150 cm
(D) 150 cm to 200 cm

3. Under which classification category do fossil fuels like coal and petroleum fall?
(A) Renewable and abiotic
(B) Renewable and biotic
(C) Non-renewable and biotic
(D) Non-renewable and abiotic

4. What causes the development of pneumatophores in mangrove vegetation?
(A) High levels of salinity in the groundwater
(B) Frequent occurrence of high cyclonic winds
(C) Anaerobic conditions in waterlogged soil
(D) Intense levels of incoming solar radiation

5. Which of the following tree species is characteristic of Tropical Evergreen Forests?
(A) Teak
(B) Rosewood
(C) Sal
(D) Neem

6. Shola forests are high-altitude stunted evergreen forests found in which of the following regions?
(A) Aravalli Range
(B) Nilgiri, Anaimalai, and Palani hills
(C) Eastern Himalayas
(D) Satpura Range

7. Which of the following best defines a renewable natural resource?
(A) A resource existing in a fixed quantity within the Earth's crust
(B) A resource replenished rapidly by natural processes
(C) A resource that cannot be recycled once it has been extracted
(D) A resource whose geological formation takes millions of years

8. Consider the following statements regarding Tropical Dry Deciduous Forests:
I. They transition into moist deciduous on the wetter margins and thorn forests on the drier margins.
II. Teak, Sal, and Peepal are common tree species found in these forests.
III. They are completely absent in the peninsular plateau region.
Which of the above statements are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II, and III

9. Arrange the following states in decreasing order of their total mangrove cover area:
I. West Bengal
II. Gujarat
III. Andaman and Nicobar Islands
IV. Andhra Pradesh
Select the correct sequence from the options below:
(A) I, II, III, IV
(B) I, III, II, IV

NODIA

(C) II, I, IV, III
(D) IV, III, II, I

10. Match List I with List II and select the correct answer using the codes given below:
List I: (Forest Type)
P. Tropical Evergreen Forest
Q. Tropical Thorn Forest
R. Alpine Forest
S. Mangrove Forest
List II: (Region in India)
1. Western Rajasthan
2. Sundarbans
3. Higher Himalayas
4. Western Ghats
(A) P-1, Q-4, R-3, S-2
(B) P-4, Q-1, R-2, S-3
(C) P-4, Q-1, R-3, S-2
(D) P-3, Q-1, R-4, S-2

11. Where is the headquarters of the Forest Survey of India (FSI) located?
(A) Bhopal
(B) Nagpur
(C) Shimla
(D) Dehradun

12. Which state in India has the largest area under forest cover?
(A) Arunachal Pradesh
(B) Chhattisgarh
(C) Madhya Pradesh
(D) Maharashtra

13. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R).
Assertion (A): Trees in tropical deciduous forests shed their leaves for about six to eight weeks in dry summer.
Reason (R): Shedding leaves helps the trees conserve moisture during periods of severe water stress.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

14. Which of the following regions does NOT support Tropical Evergreen Forests?
(A) Andaman and Nicobar Islands
(B) Western slopes of the Western Ghats
(C) Malwa Plateau in Madhya Pradesh
(D) Upper parts of Assam

15. Above which approximate altitude does alpine vegetation typically replace temperate forests in the Himalayas?
(A) 1500 meters
(B) 2500 meters
(C) 3600 meters
(D) 5000 meters

16. Identify the odd one out based on the classification of exhaustibility.
(A) Natural gas
(B) Solar energy
(C) Wind energy
(D) Tidal energy

17. Bhitarkanika, a significant mangrove ecosystem, is located in which state?
(A) Odisha
(B) West Bengal
(C) Andhra Pradesh
(D) Tamil Nadu

18. In the Champion and Seth classification of Indian forests, into how many major type groups are the forests divided?
(A) 5
(B) 12
(C) 16
(D) 20

19. Which structural adaptation is most common in the vegetation of tropical thorn forests?
(A) Broad and thin leaves for maximized photosynthesis
(B) Pneumatophores for specialized aerial respiration
(C) Drip-tip leaves to quickly shed excess rainwater
(D) Long taproots to access deep groundwater

20. What is the average annual rainfall range for Tropical Moist Deciduous Forests?
(A) 50 cm to 100 cm
(B) 100 cm to 200 cm

Click Here to Buy book on Amazon

(C) 200 cm to 250 cm
(D) Less than 70 cm

21. Deodar and Silver Fir are economically important tree species belonging to which forest type?
(A) Tropical Dry Deciduous Forests
(B) Tropical Evergreen Forests
(C) Montane Temperate Forests
(D) Alpine Scrub

22. Which state has the highest percentage of forest cover relative to its total geographical area?
(A) Meghalaya
(B) Mizoram
(C) Nagaland
(D) Arunachal Pradesh

23. What is the average annual rainfall requirement for Tropical Wet Evergreen Forests?
(A) Less than 50 cm
(B) Between 70 cm and 100 cm
(C) Between 100 cm and 200 cm
(D) More than 200 cm

24. The famous Sundari trees, which provide durable timber, are characteristic of which forest type?
(A) Tropical Evergreen Forests
(B) Montane Coniferous Forests
(C) Tropical Deciduous Forests
(D) Mangrove Forests

25. Which pair of species overwhelmingly dominates the moist deciduous forests of India?
(A) Mahogany and Ebony
(B) Teak and Sal
(C) Khair and Babool
(D) Spruce and Fir

26. Based on the 2021 forest cover assessment, what is the total forest cover of India as a percentage of its geographical area?
(A) 24.62 percent
(B) 19.81 percent
(C) 33.00 percent
(D) 21.71 percent

27. In the Himalayan region, what primarily causes the zonation of different forest types?
(A) Altitude and temperature gradient
(B) Longitudinal position and rainfall
(C) Local soil type and river flow
(D) Ocean currents and latitudinal position

28. Which is the most widespread forest type in India?
(A) Tropical Deciduous Forests
(B) Tropical Wet Evergreen Forests
(C) Montane Pine Forests
(D) Tropical Thorn Forests

29. Identify the incorrect statement regarding thorn and scrub forests.
(A) They are found in the semi-arid areas of Gujarat and Rajasthan.
(B) Babool and Khair are prominent species.
(C) The trees are dense and form a closed canopy.
(D) Stems are often succulent to conserve water.

30. Which feature is highly characteristic of Tropical Evergreen Forests?
(A) Complete shedding of leaves by all trees at the same time
(B) Presence of a single, uniform canopy layer
(C) Predominance of deep-rooted scrub vegetation
(D) Multistory structure with varied flora

31. Deforestation leads to an increase in atmospheric carbon primarily due to which effect?
(A) Increased industrial respiration
(B) Rise in ocean temperatures
(C) Loss of a major carbon sink
(D) Enhanced weathering of rocks

32. The National Forest Policy of 1988 set a target to bring what percentage of India's total geographical area under forest or tree cover?
(A) 21 percent
(B) 25 percent
(C) 33 percent
(D) 40 percent

33. Which remote sensing satellite series is primarily utilized by the FSI for mapping forest cover in recent reports?
(A) Cartosat
(B) ResourceSat
(C) INSAT
(D) Oceansat

NODIA

34. Coal, petroleum, and natural gas are classified under which category of natural resources?
(A) Non-metallic minerals
(B) Ferrous minerals
(C) Minor minerals
(D) Energy minerals

35. Who initiated the Van Mahotsav movement in India?
(A) K.M. Munshi
(B) Sunderlal Bahuguna
(C) Medha Patkar
(D) Salim Ali

36. Which type of iron ore has the highest iron content (up to 70%) and excellent magnetic qualities?
(A) Magnetite
(B) Hematite
(C) Limonite
(D) Siderite

37. The State of Forest Report is published by the Forest Survey of India at what interval?
(A) Annually
(B) Biennially
(C) Triennially
(D) Quinquennially

38. Under the Forest Rights Act 2006, what is the maximum area of forest land that can be claimed by a nuclear family for cultivation?
(A) 1 hectare
(B) 2 hectares
(C) 4 hectares
(D) 10 hectares

39. Identify the correct statement regarding the National Forest Policy 1988.
(A) Excluding tribal communities from management
(B) Total abolition of all wildlife sanctuaries
(C) Shifting responsibility solely to the states
(D) Substituting wood to ease pressure on forests

40. Which concept refers to individual farmers growing trees on their own farmlands for commercial and non-commercial purposes?
(A) Community forestry
(B) Extension forestry
(C) Urban forestry
(D) Farm forestry

41. The famous Bailadila range, known for high-grade hematite iron ore, is situated in which state?
(A) Madhya Pradesh
(B) Chhattisgarh
(C) Jharkhand
(D) Karnataka

42. What is a direct hydrological effect of large-scale deforestation?
(A) Notable increase in groundwater recharge
(B) Significant reduction in surface runoff
(C) Increased soil erosion and altered rainfall
(D) Decrease in the frequency of flash floods

43. Under the Forest Rights Act 2006, which entity has the primary authority to initiate the process for determining the nature and extent of forest rights?
(A) District Collector
(B) Gram Sabha
(C) Sub-Divisional Level Committee
(D) State Forest Department

44. In which year was the Van Mahotsav tree-planting festival first started in India?
(A) 1947
(B) 1950
(C) 1972
(D) 1980

45. Which state in India is the largest producer of iron ore?
(A) Jharkhand
(B) Chhattisgarh
(C) Odisha
(D) Karnataka

46. Consider the following statements regarding the Forest Survey of India (FSI):
I. It is an organization under the Ministry of Environment, Forest and Climate Change.
II. Its primary mandate is to conduct surveys and assessments of forest resources.
III. It relies entirely on ground surveys without the use of satellite imagery.
IV. It publishes the India State of Forest Report (ISFR).

Downloaded from www.pdf.tube

Which of the above statements is incorrect?
(A) I and II only
(B) III only
(C) I, II, and IV only
(D) II and IV only

47. Identify the odd one out among the following minerals based on their classification.
(A) Limestone
(B) Iron ore
(C) Mica
(D) Gypsum

48. The term 'Social Forestry' was first used in India by the National Commission on Agriculture in which year?
(A) 1952
(B) 1976
(C) 1988
(D) 2006

49. According to the National Forest Policy 1988, what is the specific target for forest cover in mountainous and hilly regions?
(A) 33 percent
(B) 50 percent
(C) 66 percent
(D) 75 percent

50. Consider the following statements about the Forest Rights Act (FRA), 2006:
I. It recognizes both individual rights and community rights.
II. It grants ownership of minor forest produce to forest dwellers.
III. It empowers the Gram Sabha to initiate the process of determining rights.
IV. It allows non-tribal traditional forest dwellers to claim rights if they have resided there for at least three generations.
V. It transfers the ownership of all national parks strictly to private corporations.
Which of the above statements is incorrect?
(A) I and II only
(B) III and IV only
(C) V only
(D) I, III, and V only

51. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R).
Assertion (A): Major iron ore deposits in India are found in the eastern plateau regions like Odisha and Jharkhand.
Reason (R): These regions are composed of Dharwar rock systems, which are highly metalliferous.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

52. Which region in India recorded the maximum loss of forest cover in the 2021 assessment compared to previous assessments?
(A) Central India
(B) Western Ghats
(C) Coastal plains
(D) North-Eastern region

53. What is the most appropriate ecological benefit of agroforestry?
(A) It encourages monoculture farming
(B) It completely stops the need for chemical fertilizers
(C) It enhances biodiversity and improves soil fertility
(D) It replaces natural forests with fruit orchards

54. Which of the following is an example of a ferrous metallic mineral?
(A) Bauxite
(B) Mica
(C) Manganese
(D) Copper

55. Which body acts as the nodal agency at the national level for the implementation of the Forest Rights Act 2006?
(A) Ministry of Tribal Affairs
(B) Ministry of Environment, Forest and Climate Change
(C) Ministry of Rural Development
(D) Ministry of Panchayati Raj

56. Which of the following is considered the primary cause of deforestation in the North-Eastern states of India?
(A) Shifting (Jhum) cultivation
(B) Mining activities

NODIA

(C) Construction of large dams
(D) Urban expansion

57. Match List I with List II and select the correct answer using the codes given below:
List I: (Mineral Category)
P. Ferrous Mineral
Q. Non-Ferrous Mineral
R. Non-Metallic Mineral
S. Energy Mineral
List II: (Example)
1. Copper
2. Coal
3. Iron Ore
4. Limestone
(A) P-3, Q-1, R-4, S-2
(B) P-1, Q-3, R-2, S-4
(C) P-3, Q-4, R-1, S-2
(D) P-4, Q-1, R-3, S-2

58. Community forest management is distinct from other forestry practices primarily because it involves:
(A) Active participation by local communities
(B) Exclusive management by the state department
(C) Cultivation of medicinal plants in reserves
(D) Large-scale corporate leasing of forest land

59. What was the principal objective of the National Forest Policy of 1988?
(A) Maximizing timber production for industrial needs
(B) Privatization of degraded forest lands for trade
(C) Environmental stability and ecological balance
(D) Complete ban on the extraction of minor produce

60. Van Mahotsav is traditionally celebrated across India during which period?
(A) First week of July
(B) First week of October
(C) First week of January
(D) First week of March

61. The Panchpatmali deposits, considered one of the most important bauxite reserves in India, are located in which state?
(A) Gujarat
(B) Madhya Pradesh
(C) Odisha
(D) Chhattisgarh

62. Why is mica extensively used in the electrical and electronic industries?
(A) High insulation and voltage resistance
(B) Superb conduction of electric current
(C) Low dielectric strength and heat flow
(D) Highly malleable and ductile properties

63. Identify the incorrect statement regarding coal in India.
(A) Anthracite coal is abundantly found across Central India.
(B) Bituminous coal is the most widely used coal for metallurgical purposes.
(C) Neyveli in Tamil Nadu is famous for lignite deposits.
(D) Peat represents the first stage of transformation of wood into coal.

64. Which of the following is NOT generally classified under the rare earth elements (REE) group?
(A) Neodymium
(B) Dysprosium
(C) Copper
(D) Cerium

65. Which of the following is the most appropriate reason for India importing a large quantity of copper despite having domestic reserves?
(A) Low-grade ores and insufficient reserves
(B) Highly toxic chemical mineral composition
(C) Complete ban on copper mining by the NGT
(D) Lack of advanced extraction technologies

66. Under the MMDR Act, what is the primary purpose of the District Mineral Foundation (DMF)?
(A) Benefit of persons and areas affected by mining
(B) Issue mining licenses to large private companies
(C) Resolve interstate mining and mineral disputes
(D) Control the export of various strategic minerals

Click Here to Buy book on Amazon

67. Which state has the largest total reserves of coal in India?
(A) Odisha
(B) West Bengal
(C) Jharkhand
(D) Chhattisgarh

68. Limestone is generally found in association with rocks composed of:
(A) Silicate minerals and high-density quartz
(B) Calcium or calcium and magnesium carbonates
(C) Pure aluminum oxides and metallic residues
(D) Ferrous sulphides and volcanic materials

69. The monazite sands of the Kerala coast are a rich source of which rare earth element?
(A) Thorium
(B) Uranium
(C) Lithium
(D) Cobalt

70. Which state is the leading producer of copper in India, primarily due to the Malanjkhand mines?
(A) Rajasthan
(B) Jharkhand
(C) Madhya Pradesh
(D) Karnataka

71. What is Acid Mine Drainage (AMD), a common environmental impact of mining?
(A) Acidic outflow from oxidation of sulfide minerals
(B) The use of acidic chemicals to extract gold ores
(C) The acid rain caused directly by smelting dusts
(D) The process of dissolving limestone during cement work

72. Bauxite is the principal ore for the extraction of which metal?
(A) Copper
(B) Aluminum
(C) Zinc
(D) Lead

73. Identify the incorrect statement regarding limestone deposits in India.
(A) It is primarily found in sedimentary rock sequences.
(B) The Vindhyan rock system is a major source of limestone in Madhya Pradesh.
(C) It is an essential raw material for smelting iron ore in the blast furnace.
(D) It is categorized as an energy mineral under the MMDR Act.

NODIA

74. What is the most significant industrial application of manganese?
(A) Manufacturing of heavy electrical cables
(B) Production of sustainable nuclear energy
(C) Smelting of iron ore and steel making
(D) Manufacturing of commercial-grade cement

75. Consider the following statements about the MMDR Amendment Act of 2015:
I. It introduced the auction regime for the allocation of major mineral blocks.
II. It mandated the establishment of the District Mineral Foundation (DMF).
III. It established the National Mineral Exploration Trust (NMET).
IV. It completely prohibited foreign direct investment in the mining sector.
Which of the above statements are correct?
(A) I, II, and III only
(B) II, III, and IV only
(C) I and II only
(D) I, II, III, and IV

76. Over 98% of India's total coal reserves belong to which geological period?
(A) Tertiary period
(B) Carboniferous period
(C) Quaternary period
(D) Gondwana period

77. Why are rare earth minerals considered strictly strategic?
(A) Large quantities found in every country
(B) Exclusively used for basic construction
(C) Primary fuels for thermal power plants
(D) Vital for high-tech and clean energy

78. Bauxite deposits are predominantly associated with which type of geological formations?
(A) Glacial moraines in high altitudes
(B) Alluvial plains in riverine basins
(C) Volcanic basalts of the Deccan trap
(D) Laterite rocks in plateau regions

79. The Koderma-Gaya-Hazaribagh belt, a leading producer of mica, is located in which state?
(A) Rajasthan
(B) Jharkhand
(C) Andhra Pradesh
(D) Madhya Pradesh

80. Which state holds the largest reserves of manganese ore in India?
(A) Madhya Pradesh
(B) Karnataka
(C) Maharashtra
(D) Odisha

81. Which welfare scheme is funded by the contributions made to the District Mineral Foundation?
(A) Pradhan Mantri Fasal Bima Yojana
(B) Pradhan Mantri Gram Sadak Yojana
(C) Pradhan Mantri Khanij Kshetra Kalyan Yojana
(D) Pradhan Mantri Awas Yojana

82. Select the correct sequence of states in descending order of their bauxite production:
(A) Odisha, Gujarat, Jharkhand, Maharashtra
(B) Gujarat, Odisha, Maharashtra, Jharkhand
(C) Jharkhand, Odisha, Gujarat, Maharashtra
(D) Maharashtra, Jharkhand, Odisha, Gujarat

83. The Singhbhum district, an important center for copper mining, is located in which state?
(A) Madhya Pradesh
(B) Chhattisgarh
(C) Bihar
(D) Jharkhand

84. Identify the correct pair representing a rare earth mineral and its associated state of largest deposit.
(A) Pitchblende - Gujarat
(B) Ilmenite - Punjab
(C) Monazite - Kerala
(D) Zircon - Haryana

85. Which industry is the primary consumer of limestone in India?
(A) Textile industry
(B) Petrochemical industry
(C) Cement industry
(D) Electronics industry

86. Match List I with List II and select the correct answer using the codes given below:
List I: (Coal Mine)
P. Jharia
Q. Raniganj
R. Korba
S. Singrauli
List II: (State)
1. Madhya Pradesh
2. West Bengal
3. Jharkhand
4. Chhattisgarh
(A) P-2, Q-3, R-1, S-4
(B) P-3, Q-2, R-4, S-1
(C) P-3, Q-4, R-2, S-1
(D) P-4, Q-1, R-3, S-2

87. In which year was the Mines and Minerals (Development and Regulation) (MMDR) Act originally enacted?
(A) 1948
(B) 1957
(C) 1972
(D) 1993

88. Consider the following statements about copper reserves in India:
I. India is critically deficient in the reserve and production of copper.
II. The Khetri belt in Rajasthan is a historically famous area for copper mining.
III. Copper mining in India heavily satisfies domestic demand, making imports unnecessary.
Which of the above statements are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II, and III

89. Which state is the leading producer of mica in India currently?
(A) Jharkhand
(B) Andhra Pradesh
(C) Rajasthan
(D) Bihar

90. The Balaghat district in Madhya Pradesh is renowned for producing a major share of India's:
(A) Manganese
(B) Mica

NODIA

(C) Bauxite
(D) Gold

91. Which river basin has the largest catchment area in India?
(A) Godavari
(B) Ganga
(C) Brahmaputra
(D) Indus

92. Which state was the first in India to make rooftop rainwater harvesting structures compulsory for all houses?
(A) Kerala
(B) Rajasthan
(C) Tamil Nadu
(D) Karnataka

93. A major environmental consequence of open-cast mining is:
(A) Notable reduction in regional seismic activity
(B) Significant increase in local groundwater tables
(C) Destruction of surface topography and topsoil
(D) Expansion of natural forest cover across basins

94. The 'Arvari Pani Sansad' is a famous watershed and river revival initiative located in:
(A) Gujarat
(B) Maharashtra
(C) Rajasthan
(D) Karnataka

95. The Central Ground Water Board (CGWB) operates under the jurisdiction of which ministry?
(A) Ministry of Earth Sciences
(B) Ministry of Jal Shakti
(C) Ministry of Environment, Forest and Climate Change
(D) Ministry of Agriculture and Farmers Welfare

96. Identify the incorrect statement regarding percolation tanks.
(A) They are artificially created surface water bodies submerged in highly permeable land.
(B) They are highly effective in areas with dense, impermeable clay soils.
(C) Their main purpose is to recharge the groundwater storage.
(D) They help in sustaining water levels in nearby wells during dry seasons.

97. Which legal framework in India primarily obligates mining companies to implement a Progressive Mine Closure Plan?
(A) Wildlife Protection Act, 1972
(B) Forest Rights Act, 2006
(C) Water (Prevention and Control of Pollution) Act, 1974
(D) Mineral Conservation and Development Rules (MCDR)

98. The Inter-State River Water Disputes Act was enacted by the Parliament in which year?
(A) 1950
(B) 1956
(C) 1972
(D) 1986

99. In the arid regions of Rajasthan, traditional underground tanks built for storing drinking water are locally known as:
(A) Surangams
(B) Tankas
(C) Baolis
(D) Zabo

100. Which river basin in India records the highest per capita water availability due to high rainfall and low population density?
(A) Ganga Basin
(B) Godavari Basin
(C) Brahmaputra Basin
(D) Narmada Basin

101. Select the correct sequence indicating the priority of water allocation as explicitly recommended by the National Water Policy 2002:
(A) Drinking water, Irrigation, and Hydropower
(B) Irrigation, Drinking water, and Hydropower
(C) Hydropower, Drinking water, and Irrigation
(D) Ecology, Drinking water, and Irrigation

102. Which sector is the largest consumer of both surface water and groundwater in India?
(A) Agricultural sector
(B) Industrial sector

Downloaded from www.pdf.tube

(C) Domestic sector
(D) Hydro-power sector

103. Which mechanism has been historically adopted under the 1956 Act to resolve inter-state water disputes when negotiations fail?
(A) Direct intervention by the President
(B) Constitution of Water Dispute Tribunals
(C) Referendum in the disputing states
(D) Arbitration by the United Nations

104. What is the primary cause of widespread arsenic contamination of groundwater in the Ganga-Brahmaputra plains?
(A) Industrial effluents from regional textile mills
(B) Excessive use of urea in intensive agriculture
(C) Leakage from outdated urban sewage infrastructures
(D) Leaching of arsenic due to over-extraction

105. What is the primary function of a 'check dam' in water conservation?
(A) To generate hydroelectricity on a massive scale
(B) To block the flow of a river to neighboring states
(C) Slow flow, reduce erosion, and enhance percolation
(D) To serve as an artificial lake for local navigation

106. The environmental issue of "Rat-hole mining," which was banned by the National Green Tribunal, was prevalent in which state?
(A) Jharkhand
(B) Meghalaya
(C) Odisha
(D) Chhattisgarh

107. The successful 'Neeru-Meeru' (Water and You) programme for water conservation was initiated by which state?
(A) Andhra Pradesh
(B) Maharashtra
(C) Madhya Pradesh
(D) Gujarat

108. Arrange the following river basins in decreasing order of their total utilizable surface water resources:
I. Ganga
II. Godavari
III. Krishna
IV. Mahanadi
Select the correct answer from the codes below:
(A) I, II, III, IV
(B) I, III, II, IV
(C) II, I, IV, III
(D) I, IV, II, III

NODIA

109. Match List I with List II and select the correct answer using the codes given below:
List I: (Traditional Rainwater Harvesting System)
P. Johad
Q. Eri
R. Khatri
S. Zing
List II: (State)
1. Rajasthan
2. Tamil Nadu
3. Himachal Pradesh
4. Ladakh
(A) P-2, Q-1, R-4, S-3
(B) P-1, Q-3, R-2, S-4
(C) P-3, Q-4, R-1, S-2
(D) P-1, Q-2, R-3, S-4

110. Which article of the Indian Constitution provides for the adjudication of disputes relating to waters of inter-state rivers or river valleys?
(A) Article 262
(B) Article 263
(C) Article 280
(D) Article 246

111. Contour bunding as a water and soil conservation technique is most suitable for which type of topography?
(A) Flat alluvial plains
(B) Coastal deltas
(C) Desert sand dunes
(D) Hilly and sloping terrains

112. Match List I with List II and select the correct answer using the codes given below:
List I: (Inter-State Water Dispute Tribunal)
P. Mahadayi Water Disputes Tribunal
Q. Ravi and Beas Waters Tribunal
R. Vansadhara Water Disputes Tribunal
S. Cauvery Water Disputes Tribunal

List II: (Rivers/States Involved)
1. Punjab, Haryana, Rajasthan
2. Odisha, Andhra Pradesh
3. Karnataka, Kerala, Tamil Nadu, Puducherry
4. Goa, Karnataka, Maharashtra

(A) P-1, Q-4, R-3, S-2
(B) P-4, Q-1, R-2, S-3
(C) P-4, Q-2, R-1, S-3
(D) P-3, Q-1, R-2, S-4

113. Which region in India is characterized by the highest level of groundwater over-exploitation?
(A) North-Eastern states and high rainfall areas
(B) Coastal plains and delta regions of Odisha
(C) North-Western states of Punjab and Haryana
(D) Central highlands and parts of Madhya Pradesh

114. The 'Hariyali' watershed development project is executed primarily through the active participation of:
(A) State Forest Departments
(B) Gram Panchayats
(C) Non-Governmental Organizations only
(D) Central Ground Water Board

115. The Narmada Water Disputes Tribunal involved which of the following states?
(A) Madhya Pradesh, Uttar Pradesh, Bihar, Gujarat
(B) Madhya Pradesh, Chhattisgarh, Maharashtra, Andhra Pradesh
(C) Gujarat, Rajasthan, Punjab, Haryana
(D) Madhya Pradesh, Gujarat, Maharashtra, Rajasthan

116. India accounts for about 18% of the world's population but has only what percentage of the world's freshwater resources?
(A) 2 percent
(B) 4 percent
(C) 8 percent
(D) 12 percent

117. What is the fundamental approach of a watershed development programme?
(A) Inter-linking of major perennial rivers
(B) Supplying desalinated seawater to inland
(C) Building multi-purpose mega dams on rivers
(D) Judicious use of resources within a basin

118. Which major west-flowing river basin forms a vital part of Madhya Pradesh's water resources?
(A) Mahanadi
(B) Krishna
(C) Cauvery
(D) Narmada

119. What is the most significant long-term ecological benefit of modern rainwater harvesting techniques like recharge pits?
(A) Higher groundwater table and diluted pollutants
(B) Eliminates the need for municipal water supply
(C) Provides permanent habitat for industrial fishing
(D) Stops seasonal rainfall completely in urban areas

120. In groundwater assessment terminology, what does a "Dark Block" or "Over-exploited Block" signify?
(A) Extraction exceeds annual replenishable recharge
(B) Groundwater is completely pure and undisturbed
(C) Areas devoid of any significant local aquifers
(D) Areas where surface water is heavily polluted

121. The 'Namami Gange Programme', an integrated conservation mission, was approved by the Union Government in which year?
(A) 2010
(B) 2014
(C) 2017
(D) 2021

122. The National Water Policy 2012 recommends the establishment of which statutory body in each state to determine water tariffs?
(A) Central Water Commission
(B) National Green Tribunal
(C) State Pollution Control Board
(D) State Water Regulatory Authority

123. The most recent comprehensive National Water Policy of India was adopted in which year?
(A) 1987
(B) 2002
(C) 2012

Click Here to Buy book on Amazon

(D) 2020

124. Which schedule of the Indian Constitution contains provisions restricting the transfer of tribal land to non-tribals, which is a major issue in mineral-rich tribal belts?
(A) Third Schedule
(B) Fifth Schedule
(C) Eighth Schedule
(D) Ninth Schedule

125. Eutrophication in water bodies, caused by excessive nutrient runoff, leads directly to a hazardous decrease in:
(A) Total dissolved solids
(B) Turbidity
(C) Dissolved oxygen
(D) Water temperature

126. Which key concept regarding water valuation was heavily emphasized in the National Water Policy 2012?
(A) Economic pricing to ensure conservation
(B) Water treated entirely as a free commodity
(C) Handling allocation solely by private entities
(D) Groundwater not regulated by the state bodies

127. Which of the following is NOT one of the main pillars of the Namami Gange Programme?
(A) Sewerage Treatment Infrastructure
(B) Inter-linking of Peninsular Rivers
(C) River-Front Development
(D) Biodiversity Conservation and Afforestation

128. A high Biological Oxygen Demand (BOD) in a river indicates that the water is:
(A) Highly pure and potable
(B) Devoid of any bacterial life
(C) Rich in toxic heavy metals like lead
(D) Highly polluted with organic matter

129. Identify the odd one out among the sources of water pollution based on its source type (point vs. non-point).
(A) Effluent discharge from a chemical factory
(B) Agricultural runoff laden with fertilizers
(C) Sewage discharge from an urban treatment plant
(D) Discharge from an active mining site drainage pipe

NODIA

130. Consider the following statements regarding critical minerals:
I. The government recently released a list of 30 critical minerals essential for economic development and national security.
II. Lithium, Cobalt, and Nickel are included in the critical minerals list.
III. Khanij Bidesh India Ltd. (KABIL) was established to ensure a consistent supply of critical and strategic minerals to the domestic market.
IV. India is currently 100% self-sufficient in the production of Lithium and Cobalt.
V. Critical minerals are vital for the transition to green technologies like Electric Vehicles (EVs).
Which of the above statements are correct?
(A) I, II, III, and V only
(B) I, III, IV, and V only
(C) II, III, and IV only
(D) I, II, III, IV, and V

www.nodia.in

ANSWERS

1. (B) Lands with tree canopy density of 70 percent and above
Very Dense Forests are defined by the Forest Survey of India as lands with tree canopy density of 70 percent and above. This classification is used in the India State of Forest Report to differentiate high-density forests from moderately dense and open forests. Monitoring these areas is crucial for understanding the ecological health of primary forest regions in India.

2. (A) Less than 50 cm
Thorn and scrub forests thrive in semi-arid and arid regions where annual rainfall is less than 50 centimeters. These environments necessitate specific botanical adaptations to conserve water, such as succulent stems and reduced leaves. Such vegetation is commonly found in parts of Rajasthan, Gujarat, and the rain-shadow regions of the Deccan plateau where moisture is extremely scarce throughout the year.

3. (C) Non-renewable and biotic
Fossil fuels including coal and petroleum are classified as non-renewable and biotic resources. They are formed over millions of years from the organic remains of prehistoric plants and animals under intense pressure and heat. Because their rate of consumption far exceeds the extremely slow geological process of their formation, they are considered finite and essentially non-replenishable on a human timescale.

4. (C) Anaerobic conditions in waterlogged soil
Mangrove vegetation develops specialized roots called pneumatophores to facilitate gas exchange in waterlogged, saline soils. These soils are often anaerobic, meaning they lack sufficient oxygen for normal root respiration due to constant tidal flooding. These upward-growing roots emerge from the mud to absorb oxygen directly from the atmosphere, ensuring the survival of the trees in these challenging and coastal environments.

5. (B) Rosewood
Rosewood is a characteristic tree species found in Tropical Evergreen Forests, which are known for high rainfall and dense multi-layered canopies. These forests do not have a distinct leaf-shedding season, appearing green throughout the year. Along with ebony and mahogany, rosewood provides valuable hardwood, often found in regions like the Western Ghats and the Andaman and Nicobar Islands of India.

6. (B) Nilgiri, Anaimalai, and Palani hills
Shola forests are unique high-altitude stunted evergreen patches found interspersed with grasslands in the Nilgiri, Anaimalai, and Palani hills of Southern India. These ecosystems are located in the higher reaches of the Western Ghats, typically above 1,500 meters. They provide critical habitats for endemic biodiversity and play a vital role in maintaining the hydrological balance of the entire region.

7. (B) A resource replenished rapidly by natural processes
A renewable natural resource is defined as one that can be replenished or regenerated rapidly through natural processes over a short period. Examples include solar energy, wind, and water, which are theoretically inexhaustible if managed sustainably. This distinguishes them from non-renewable resources, such as fossil fuels, which take millions of years to form and cannot be replaced once they are consumed.

8. (A) I and II only
Tropical dry deciduous forests are widespread in India, covering areas with annual rainfall between 70 and 100 centimeters. They serve as a transition zone between moist deciduous and thorn forests. Dominant species include teak, sal, and peepal. These forests are present across large parts of the peninsular plateau and the plains of Uttar Pradesh and Bihar during the summer seasons.

9. (A) I, II, III, IV
West Bengal holds the largest area of mangrove cover in India, primarily due to the vast Sundarbans delta. Gujarat follows as the second state with significant mangrove forests along its

Downloaded from www.pdf.tube

coastline. The Andaman and Nicobar Islands and Andhra Pradesh rank next in terms of total area. These coastal ecosystems are vital for protecting shorelines against erosion and storm surges during cyclones.

10. (C) P-4, Q-1, R-3, S-2
Tropical evergreen forests are found in the Western Ghats, while tropical thorn forests are characteristic of the semi-arid regions of Western Rajasthan. Alpine forests are situated in the higher reaches of the Himalayas, and mangrove forests dominate the Sundarbans. This distribution is primarily governed by regional variations in annual rainfall, temperature gradients, and specific geographical features across the Indian subcontinent.

11. (D) Dehradun
The Forest Survey of India has its headquarters located in Dehradun, Uttarakhand. Established in 1981, this organization operates under the Ministry of Environment, Forest and Climate Change. Its primary role involves conducting periodic assessments of the nation's forest cover and resources. These findings are regularly published in the India State of Forest Report, which serves as a vital database for planners.

12. (C) Madhya Pradesh
Madhya Pradesh possesses the largest area of forest cover in India in terms of absolute geographical hectares. The state's diverse topography supports various forest types, ranging from tropical deciduous to thorn forests. This vast green cover is essential for biodiversity conservation and provides livelihoods for numerous tribal communities. Frequent assessments by the Forest Survey of India confirm its leading position in area.

13. (A) Both A and R are true and R is the correct explanation of A.
Trees in tropical deciduous forests shed their leaves for several weeks during the dry summer season to survive harsh conditions. This physiological adaptation is a response to severe water stress, as losing leaves significantly reduces the rate of transpiration. By conserving internal moisture through this mechanism, these trees can withstand long periods of drought until the arrival of the monsoon.

14. (C) Malwa Plateau in Madhya Pradesh
The Malwa Plateau in Madhya Pradesh does not support tropical evergreen forests because it receives moderate rainfall, typically leading to deciduous vegetation. Tropical evergreen forests require heavy annual rainfall exceeding 200 centimeters and a short dry season. Such conditions are found on the western slopes of the Western Ghats, the Andaman and Nicobar Islands, and parts of Upper Assam.

15. (C) 3600 meters
Alpine vegetation typically begins to replace temperate forests in the Himalayas at altitudes above 3,600 meters. As elevation increases, temperatures drop and the growing season shortens, leading to the dominance of silver firs, junipers, and birches. Eventually, these give way to alpine pastures used by nomadic tribes. Beyond this zone, the landscape transitions into permanent snowfields where no vegetation grows.

16. (A) Natural gas
Natural gas is classified as a non-renewable or exhaustible energy resource because it exists in fixed quantities and takes millions of years to form. In contrast, solar, wind, and tidal energy are considered renewable or inexhaustible sources because they are continuously replenished by natural processes. Switching to renewable alternatives is essential for long-term energy security and for reducing environmental impacts.

17. (A) Odisha
Bhitarkanika is a significant mangrove ecosystem located in the state of Odisha, specifically in the Kendrapara district. It is formed by the deltas of the Brahmani and Baitarani rivers. The area is a designated Ramsar site and a national park, renowned for being one of the largest nesting grounds for olive ridley sea turtles and hosting a range of saltwater crocodiles.

18. (C) 16
The Champion and Seth classification system categorizes Indian forests into 16 major type groups based on climatic factors and vegetation characteristics. This detailed framework was first established in 1936 and revised in 1968 to provide a scientific basis for forest management. It further subdivides these groups into numerous

NODIA

types, allowing for a precise understanding of the ecological diversity across India.

19. (D) Long taproots to access deep groundwater
Vegetation in tropical thorn forests has evolved long taproots that penetrate deep into the soil to access groundwater in arid environments. This structural adaptation is necessary because surface moisture is extremely limited due to low rainfall. Additionally, these plants often feature small, waxy leaves or thorns to minimize transpiration losses, ensuring survival in the harsh, dry conditions of northwestern India.

20. (B) 100 cm to 200 cm
Tropical moist deciduous forests are found in regions receiving an annual rainfall range of 100 to 200 centimeters. These forests are primarily located on the eastern slopes of the Western Ghats, the foothills of the Himalayas, and parts of Odisha. They represent a transition between evergreen and dry deciduous forests, characterized by trees like teak that shed leaves seasonally.

21. (C) Montane Temperate Forests
Deodar and silver fir are economically important coniferous species found in the montane temperate forests of the Himalayas. These trees thrive at higher altitudes where temperatures are cool and moisture is sufficient. Deodar is particularly valued for its durable, rot-resistant timber used in construction and sleepers. These forests provide vital ecosystem services, including soil stabilization and regulating water flow in basins.

22. (B) Mizoram
Mizoram has the highest percentage of forest cover relative to its total geographical area among all Indian states. According to the India State of Forest Report, this Northeastern state maintains a significant portion of its land under diverse forest types, despite the challenges posed by shifting cultivation. This high density of green cover is crucial for regional climate and local biodiversity.

23. (D) More than 200 cm
Tropical wet evergreen forests require an average annual rainfall of more than 200 centimeters and a relatively short dry season. These forests are characterized by high humidity and consistent temperatures throughout the year, supporting a dense and multi-layered vegetation structure. They are found in high-rainfall regions such as the Western Ghats, the Andaman and Nicobar Islands, and Northeastern states.

24. (D) Mangrove Forests
Sundari trees are a characteristic species of mangrove forests, particularly in the Sundarbans region of West Bengal. These trees are well-adapted to saline tidal environments and provide strong, durable timber used for boat building and construction. Their presence is a defining feature of the deltaic ecosystem, where they grow alongside other salt-tolerant plants that protect the coastline from storm surges.

25. (B) Teak and Sal
Teak and sal are the two most dominant and economically significant tree species in the moist deciduous forests of India. These forests cover vast areas of the country where rainfall is moderate. Teak is primarily found in the peninsular region, while sal is more common in the northern and eastern parts. Both species are highly valued for their durable wood.

26. (D) 21.71 percent
According to the 2021 India State of Forest Report, the total forest cover of India is 21.71 percent of its geographical area. This figure excludes tree cover outside of recorded forest areas. When combined with tree cover, the total green cover reaches approximately 24.62 percent. Achieving the national target of 33 percent remains a long-term goal for environmental policy.

27. (A) Altitude and temperature gradient
In the Himalayan region, the distinct zonation of forest types is primarily caused by changes in altitude and the resulting temperature gradient. As elevation increases, temperatures drop significantly, leading to a transition from tropical and subtropical forests at the base to temperate, sub-alpine, and eventually alpine vegetation. This vertical distribution reflects how plant communities are adapted to specific thermal conditions.

28. (A) Tropical Deciduous Forests
Tropical deciduous forests, also known as monsoon forests, are the most widespread forest

Click Here to Buy book on Amazon

type in India. They cover areas receiving between 70 and 200 centimeters of rainfall. These forests are divided into moist and dry categories based on water availability. Their dominance across the Indian landscape is due to the seasonal nature of the monsoon, which dictates the leaf-shedding patterns.

29. (C) The trees are dense and form a closed canopy.
In thorn and scrub forests, the trees are typically scattered and do not form a dense, closed canopy. Instead, the vegetation is sparse with open spaces to minimize competition for limited water resources. These forests are found in semi-arid regions of Gujarat and Rajasthan, where species like babool dominate. Succulent stems and thorns are common adaptations to conserve moisture.

30. (D) Multistory structure with varied flora
Tropical evergreen forests are distinguished by their complex multistory structure, featuring several layers of vegetation from ground shrubs to emergent giants. This dense arrangement allows various species to coexist by utilizing different light levels. Unlike deciduous forests, there is no period when all trees shed their leaves simultaneously, ensuring the forest appears green year-round. This high biodiversity is typical.

31. (C) Loss of a major carbon sink
Deforestation contributes to increased atmospheric carbon levels primarily because it results in the loss of major carbon sinks. Living trees absorb carbon dioxide during photosynthesis and store it in their biomass. When forests are cleared or burned, this stored carbon is released back into the atmosphere. Consequently, reducing forest cover diminishes the Earth's natural capacity to mitigate warming through sequestration.

32. (C) 33 percent
The National Forest Policy of 1988 established a specific target to bring 33 percent of India's total geographical area under forest or tree cover. This goal was set to ensure environmental stability, preserve ecological balance, and protect the country's diverse biological heritage. To achieve this, the policy emphasizes afforestation, social forestry, and the protection of existing natural forests.

33. (B) ResourceSat
The Forest Survey of India primarily utilizes the ResourceSat satellite series for mapping and monitoring the nation's forest cover in its biennial reports. These satellites provide high-resolution multispectral imagery that allows for the identification of different forest density classes across various terrains. By leveraging advanced remote sensing, the organization can track changes in green cover over time for environmental conservation.

34. (D) Energy minerals
Coal, petroleum, and natural gas are classified as energy minerals because they are the primary sources for generating power and fuel for industrial and domestic use. These minerals are formed from organic matter over geological time and store chemical energy. Given their essential role in driving the modern economy, managing these non-renewable resources is a key focus of national policy.

35. (A) K.M. Munshi
K.M. Munshi, the then Union Minister for Agriculture and Food, initiated the Van Mahotsav movement in 1950. This annual tree-planting festival was launched to raise awareness about the importance of forests and to encourage citizens to plant trees across the country. Over the decades, it has become a significant national event, promoting environmental conservation and the expansion of green cover.

36. (A) Magnetite
Magnetite is the highest quality iron ore, containing up to 70 percent metallic iron. It is renowned for its excellent magnetic properties, making it particularly valuable in the electrical industry. While hematite is more commonly used in large-scale industrial steel production due to its abundance, magnetite remains superior in terms of pure iron content and specialized applications requiring high-grade characteristics.

37. (B) Biennially
The India State of Forest Report is published by the Forest Survey of India at biennial intervals, meaning every two years. This regular assessment provides comprehensive data on forest cover, tree cover, and mangrove areas across the country. By comparing data from

Downloaded from www.pdf.tube

successive reports, policymakers can evaluate the effectiveness of conservation strategies and identify regions requiring urgent intervention to prevent deforestation.

38. (C) 4 hectares
Under the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act of 2006, a nuclear family can claim up to 4 hectares of forest land for cultivation. This provision applies specifically to land that was already being cultivated by the family before the cutoff date of December 2005. The act aims to correct historical injustices.

39. (D) Substituting wood to ease pressure on forests
One of the key strategies identified in the National Forest Policy of 1988 was substituting wood with other materials to ease the immense pressure on existing forest resources. By encouraging the use of alternative fuels and construction materials, the policy sought to reduce the commercial exploitation of timber. This approach supports the overarching goals of maintaining environmental stability and biodiversity.

40. (D) Farm forestry
Farm forestry refers to the practice where individual farmers grow trees on their private agricultural lands for both commercial and non-commercial purposes. This approach encourages the integration of timber or fruit-bearing trees with traditional crops, providing farmers with an additional source of income and fuel. It also contributes to increasing the overall tree cover outside of recorded forest areas.

41. (B) Chhattisgarh
The Bailadila range is located in the Dantewada district of Chhattisgarh and is famous for its massive deposits of high-grade hematite iron ore. The ore from these mines is known for its purity and is primarily exported to countries like Japan and South Korea via the Visakhapatnam port. This region plays a critical role in supporting India's mineral economy.

42. (C) Increased soil erosion and altered rainfall
Large-scale deforestation has a direct and severe hydrological impact by increasing soil erosion and altering local rainfall patterns. Without the protective canopy and root systems of trees, topsoil is easily washed away during heavy rains, leading to increased surface runoff and more frequent flash floods. Furthermore, the reduction in transpiration from forests can disrupt the regional moisture cycle significantly.

43. (B) Gram Sabha
Under the Forest Rights Act of 2006, the Gram Sabha is the primary authority empowered to initiate the process for determining the nature and extent of forest rights. Local communities use this platform to identify individual and community claims over forest land and resources. These claims are then screened by committees at the sub-divisional level, ensuring recognition of rights.

44. (B) 1950
The Van Mahotsav festival was first started in India in 1950 by K.M. Munshi, the then Union Minister for Agriculture and Food. It was envisioned as a week-long movement to encourage large-scale tree planting and to foster a culture of forest conservation among the public. Celebrated annually during the first week of July, it coincides with the monsoon.

NODIA

45. (C) Odisha
Odisha is the leading producer of iron ore in India, contributing a significant portion of the country's total output. The state possesses massive reserves of high-quality hematite, primarily located in the Keonjhar, Sundergarh, and Mayurbhanj districts. This abundant mineral wealth supports numerous steel plants and contributes substantially to the national economy. Efficient mining operations in Odisha are vital for markets.

46. (B) III only
The Forest Survey of India does not rely entirely on ground surveys; it heavily utilizes advanced satellite imagery for its assessments. While ground truth verification is conducted, remote sensing technology is the primary tool for mapping forest cover across the country. The organization, under the Ministry of Environment, is responsible for publishing the comprehensive India State of Forest Report biennially.

47. (B) Iron ore
Iron ore is classified as a metallic mineral because it contains metal in its raw form. In contrast,

limestone, mica, and gypsum are non-metallic minerals, which do not yield metals when processed. Metallic minerals are typically found in igneous and metamorphic rock formations, while non-metallic minerals are often associated with sedimentary sequences. This distinction is fundamental to mineral resource classification.

48. (B) 1976
The term 'Social Forestry' was first officially used in India by the National Commission on Agriculture in 1976. This concept was introduced to encourage the management and protection of forests, as well as afforestation on barren lands, with the goal of helping environmental and rural development. It focuses on meeting the fuel, fodder, and timber needs of local communities.

49. (C) 66 percent
The National Forest Policy of 1988 set a specific target of maintaining 66 percent of the total geographical area in mountainous and hilly regions under forest or tree cover. This higher target, compared to the national average of 33 percent, is aimed at preventing soil erosion and land degradation. It also ensures the stability of fragile mountain ecosystems effectively.

50. (C) V only
The statement claiming that the Forest Rights Act transfers ownership of national parks to private corporations is incorrect. In reality, the act recognizes the rights of forest-dwelling communities and tribal groups within protected areas, emphasizing community-based conservation. It grants ownership of minor forest produce and recognizes individual and community land rights, while empowering Gram Sabhas to manage traditional forest territories.

51. (A) Both A and R are true and R is the correct explanation of A.
Major iron ore deposits in India are concentrated in the eastern plateau regions of Odisha and Jharkhand. These areas are part of the ancient Dharwar rock system, which is highly metalliferous and contains some of the world's best iron ore reserves. The geological age and composition of these rocks provide the ideal conditions for the formation of rich hematite.

52. (D) North-Eastern region
The North-Eastern region of India recorded the maximum loss of forest cover in the 2021 assessment compared to previous years. This decline is largely attributed to the continued practice of shifting cultivation, infrastructure development, and various anthropogenic pressures. Despite being a major biodiversity hotspot, the region faces significant challenges in maintaining its vast forest cover, necessitating focused conservation efforts.

53. (C) It enhances biodiversity and improves soil fertility
The most appropriate ecological benefit of agroforestry is that it enhances biodiversity and improves soil fertility on agricultural lands. By integrating trees with crops, farmers can create more resilient ecosystems that support various plant and animal species. Trees help in nutrient cycling, reduce soil erosion, and provide organic matter, which together enhance the productive capacity of the land naturally.

54. (C) Manganese
Manganese is a prime example of a ferrous metallic mineral because it is an essential component in the production of iron and steel. Ferrous minerals are those that contain iron or are primarily used in iron-based metallurgy. In contrast, bauxite and copper are non-ferrous metallic minerals, and mica is a non-metallic mineral. Manganese's role in toughening steel is indispensable.

55. (A) Ministry of Tribal Affairs
The Ministry of Tribal Affairs serves as the nodal agency at the national level for the implementation of the Forest Rights Act of 2006. Its role involves overseeing the recognition of land and resource rights for Scheduled Tribes and other traditional forest dwellers. While the Ministry of Environment manages the land, the Ministry of Tribal Affairs ensures social justice.

56. (A) Shifting (Jhum) cultivation
Shifting cultivation, locally known as Jhum, is considered the primary cause of deforestation in the North-Eastern states of India. This traditional farming method involves clearing forest patches by burning vegetation to grow crops for a few years before moving to a new plot. While it

Click Here to Buy book on Amazon

was sustainable in the past, shortened fallow cycles due to population pressure now lead to degradation.

57. (A) P-3, Q-1, R-4, S-2
Iron ore is a ferrous mineral, while copper is a non-ferrous mineral. Limestone serves as an example of a non-metallic mineral, and coal is classified as an energy mineral. These categories are based on the physical and chemical properties of the minerals and their primary industrial uses. Understanding these classifications is essential for mineral resource management and planning.

58. (A) Active participation by local communities
Community forest management is distinct because it prioritizes the active participation of local communities in the protection and sustainable use of forest resources. This approach recognizes that people living near forests have a direct stake in their health and are often best positioned to manage them. By involving these groups, conservation efforts become more effective, and social equity is improved.

59. (C) Environmental stability and ecological balance
The principal objective of the National Forest Policy of 1988 was to ensure environmental stability and maintain ecological balance, including atmospheric equilibrium. Unlike earlier policies that focused on commercial timber extraction, this framework prioritized the preservation of natural heritage and the protection of biodiversity. It also emphasized the need to check soil erosion and denudation in major catchment areas.

60. (A) First week of July
Van Mahotsav is traditionally celebrated across India during the first week of July. This timing is chosen to coincide with the onset of the southwest monsoon rains in most parts of the country, which provides ideal moisture conditions for the survival of newly planted saplings. The festival aims to increase forest cover and raise awareness about the importance of trees.

61. (C) Odisha
The Panchpatmali deposits, located in the Koraput district of Odisha, are among the most significant bauxite reserves in India. These deposits are exploited by the National Aluminium Company Limited to support its large-scale alumina and aluminum production. Odisha's leadership in bauxite production is largely due to these massive plateau-top deposits, which are characteristic of the region's geological formations.

62. (A) High insulation and voltage resistance
Mica is extensively used in the electrical and electronic industries due to its exceptional properties, including high dielectric strength and low power loss factor. It acts as a superior insulator with high voltage resistance, allowing it to withstand extreme electrical stress and heat. These qualities make it an indispensable material for manufacturing capacitors and various components in modern electronic devices.

63. (A) Anthracite coal is abundantly found across Central India.
The statement that anthracite coal is abundantly found across Central India is incorrect. Anthracite is the highest grade of coal but is extremely rare in India, found only in small quantities in the Jammu and Kashmir region. Most of India's coal reserves consist of bituminous and lignite varieties, with bituminous coal being the primary source for metallurgical processes.

64. (C) Copper
Copper is not classified under the rare earth elements group; it is a common non-ferrous base metal widely used for its high electrical conductivity. Rare earth elements include a group of seventeen chemical elements, such as neodymium and cerium, which possess unique magnetic and luminescent properties. These elements are vital for modern high-tech applications, including smartphones and wind turbines.

65. (A) Low-grade ores and insufficient reserves
India imports a large quantity of copper primarily because domestic reserves are limited and often consist of low-grade ores. Despite the presence of mines in Rajasthan and Madhya Pradesh, the total domestic production is insufficient to meet the rapidly growing demand from the electrical, construction, and electronics sectors. Consequently, the country relies on international markets to bridge the significant gap.

NODIA

66. (A) Benefit of persons and areas affected by mining
Under the Mines and Minerals (Development and Regulation) Act, the primary purpose of the District Mineral Foundation is to work for the interest and benefit of persons and areas affected by mining-related operations. It is a non-profit trust funded by contributions from mining lease holders. The foundation's resources are utilized to implement various social projects like healthcare.

67. (C) Jharkhand
Jharkhand holds the largest total reserves of coal in India, with major fields located in Jharia, Dhanbad, and Bokaro. These reserves are part of the Gondwana geological formation and contain high-quality bituminous coal suitable for metallurgical purposes. The state's extensive coal deposits have historically driven the development of heavy industries and thermal power plants, making it a central hub.

68. (B) Calcium or calcium and magnesium carbonates
Limestone is a sedimentary rock generally found in association with rocks composed of calcium carbonates or a combination of calcium and magnesium carbonates. It forms primarily from the accumulation of shell, coral, and algal debris in marine environments. This mineral is a fundamental raw material for the cement industry and is also used as a flux in iron smelting.

69. (A) Thorium
The monazite sands found along the Kerala coast are a rich and significant source of thorium, a radioactive element used in nuclear energy research. Monazite is a phosphate mineral that also contains various rare earth elements. India's large thorium reserves are central to its long-term three-stage nuclear power program, which aims to achieve energy independence by utilizing indigenous fuel.

70. (C) Madhya Pradesh
Madhya Pradesh is currently the leading producer of copper in India, mainly due to the high output from the Malanjkhand mines in the Balaghat district. This open-cast mine is the largest of its kind in the country and provides a substantial portion of the nation's total copper ore. Although Rajasthan has historically been important, Madhya Pradesh's industrial production now dominates.

71. (A) Acidic outflow from oxidation of sulfide minerals
Acid Mine Drainage is a serious environmental impact of mining caused by the oxidation of sulfide minerals, such as pyrite, when they are exposed to air and water. This chemical reaction produces sulfuric acid, which then leaches heavy metals from the surrounding rocks. The resulting highly acidic outflow can contaminate local streams and groundwater, severely harming the aquatic life.

72. (B) Aluminum
Bauxite is the principal ore used for the commercial extraction of aluminum. It is formed through the chemical weathering of rocks rich in aluminum silicates under tropical or subtropical conditions. The processing of bauxite involves refining it into alumina, which is then electrolytically reduced to produce metallic aluminum. This metal is highly valued for its light weight and corrosion resistance.

73. (D) It is categorized as an energy mineral under the MMDR Act.
The statement that limestone is categorized as an energy mineral is incorrect. Limestone is classified as a non-metallic mineral and is primarily used as a raw material in the cement and iron and steel industries. Energy minerals specifically include coal, petroleum, and natural gas. Limestone is indeed found in sedimentary rock sequences, with the Vindhyan system being a major source.

74. (C) Smelting of iron ore and steel making
The most significant industrial application of manganese is in the smelting of iron ore and the production of steel alloys. It acts as a deoxidizing and desulfurizing agent, which improves the strength and durability of the final steel product. Nearly ten kilograms of manganese are typically required to manufacture one tonne of steel, making it an indispensable mineral resource.

75. (A) I, II, and III only
The MMDR Amendment Act of 2015 introduced a transparent auction regime for allocating major

Downloaded from www.pdf.tube

mineral blocks and mandated the establishment of the District Mineral Foundation to benefit mining-affected areas. It also established the National Mineral Exploration Trust to promote mineral discovery. However, the act did not completely prohibit foreign direct investment in the mining sector, which remains open to investors.

76. (D) Gondwana period
Over 98 percent of India's total coal reserves belong to the Gondwana geological period, which dates back approximately 250 million years. These deposits are primarily found in the river valleys of the Damodar, Son, Mahanadi, and Godavari. Gondwana coal is mostly of the bituminous variety and is crucial for metallurgical purposes and power generation for the national economy.

77. (D) Vital for high-tech and clean energy
Rare earth minerals are considered strictly strategic because they are vital for the manufacturing of high-tech products and clean energy technologies. Their unique magnetic and chemical properties are essential for components in smartphones, laser systems, and electric vehicle motors. Ensuring a stable supply of these minerals is a priority for national security and the global transition to sustainability.

78. (D) Laterite rocks in plateau regions
Bauxite deposits are predominantly associated with laterite rocks found in plateau regions. These rocks are formed through the intense chemical weathering of parent materials under tropical conditions with high rainfall. This process leaches away more soluble elements, leaving behind a residue rich in aluminum and iron oxides. Significant deposits are found in the plateaus of Odisha and Chhattisgarh.

79. (B) Jharkhand
The Koderma-Gaya-Hazaribagh belt, located in Jharkhand, is a world-renowned center for the production of high-quality mica. This region has historically been the leading producer of muscovite mica, which is highly valued for its transparency and insulating properties in the electrical industry. The mica found here occurs in pegmatite veins within metamorphic rocks and remains a significant contributor.

80. (D) Odisha
Odisha holds the largest reserves of manganese ore in India, making it a critical player in the nation's metallurgical sector. The state's deposits are mainly found in the Keonjhar and Sundergarh districts. These high-grade reserves support both the domestic steel industry and international exports. Manganese is essential for manufacturing steel alloys, and Odisha's abundant supply ensures steady industrial inputs.

81. (C) Pradhan Mantri Khanij Kshetra Kalyan Yojana
The Pradhan Mantri Khanij Kshetra Kalyan Yojana is the welfare scheme funded by contributions made to the District Mineral Foundation. It is designed to implement various developmental projects in mining-affected areas. The scheme focuses on high-priority areas such as drinking water supply, environmental protection, and education to improve the quality of life for communities directly impacted by mining.

82. (A) Odisha, Gujarat, Jharkhand, Maharashtra
Odisha is the leading producer of bauxite in India, followed by Gujarat, Jharkhand, and Maharashtra. This sequence reflects the distribution of significant lateritic deposits across the country. Odisha's dominance is largely due to the massive reserves in its plateau regions, such as the Panchpatmali deposits. These states collectively provide the raw material necessary for India's aluminum smelting industry.

83. (D) Jharkhand
The Singhbhum district, an important center for copper, iron ore, and uranium mining, is located in the state of Jharkhand. This region is part of the mineral-rich Chota Nagpur plateau and has a long history of industrial mining activities. It hosts several major mines and processing plants that are vital to India's mineral output and metallurgical industrial needs.

NODIA

84. (C) Monazite - Kerala
Monazite is a rare earth mineral found in significant quantities in the beach sands of the Kerala coast. It is a primary source of thorium and various rare earth elements, which are essential for nuclear research and high-tech industrial applications. This geological association makes Kerala a strategically important state for India's

nuclear energy program and its technological goals.

85. (C) Cement industry
The cement industry is the primary consumer of limestone in India, using it as a fundamental raw material. Limestone provides the necessary calcium carbonate that, when processed, forms the basis of various cement types used in construction. Additionally, significant quantities of limestone are used as a flux in the iron and steel industry to remove impurities during smelting processes.

86. (B) P-3, Q-2, R-4, S-1
Jharia is located in Jharkhand and is famous for its coking coal, while Raniganj is the oldest coalfield in West Bengal. Korba is a major coal-producing region in Chhattisgarh, and Singrauli is located in Madhya Pradesh. These mines are vital components of India's energy infrastructure, providing the fuel necessary for thermal power plants and various metallurgical industries.

87. (B) 1957
The Mines and Minerals (Development and Regulation) Act was originally enacted by the Indian Parliament in 1957. This legislation provides the basic legal framework for the regulation and development of mines and minerals across the country. It empowers the central government to manage major minerals while leaving the regulation of minor minerals to the respective state governments effectively.

88. (A) I and II only
India is critically deficient in both the reserve and production of copper, necessitating significant imports to meet domestic demand. The Khetri belt in Rajasthan is a historically famous area for copper mining. Despite these efforts, the high growth in the electrical and electronics sectors ensures that domestic production cannot keep pace with consumption, making imports a permanent economic reality.

89. (B) Andhra Pradesh
Andhra Pradesh is currently the leading producer of mica in India, with the Nellore district being a major mining hub. While Jharkhand and Rajasthan have significant mica deposits and historical importance, recent production data indicates that Andhra Pradesh contributes the largest share to the national output. This mica is highly valued for its quality and used in global electronics.

90. (A) Manganese
The Balaghat district in Madhya Pradesh is renowned for producing a major share of India's manganese ore. It is home to the Bharveli mine, which is one of the largest underground manganese mines in Asia. This high-quality ore is essential for the production of steel and ferro-alloys. The district's mining activities are central to the state's economy and infrastructure.

91. (B) Ganga
The Ganga river basin has the largest catchment area in India, covering approximately one-fourth of the country's total land area. It flows through several states, including Uttarakhand, Uttar Pradesh, Bihar, and West Bengal, supporting a massive population. The basin's vast network of tributaries and high annual rainfall contribute to its status as the most significant water resource for agriculture.

92. (C) Tamil Nadu
Tamil Nadu was the first state in India to make rooftop rainwater harvesting structures compulsory for all houses and buildings to address growing water scarcity. This pioneering policy was implemented to improve groundwater recharge and ensure long-term water security. The initiative has successfully raised groundwater tables in many urban areas, serving as a model for other states facing scarcity.

93. (C) Destruction of surface topography and topsoil
A major environmental consequence of open-cast mining is the destruction of surface topography and the loss of fertile topsoil. This method involves removing large layers of earth to access mineral deposits, resulting in massive pits and displacement of flora. The process leads to significant land degradation, increased soil erosion, and the disruption of local drainage patterns and natural ecosystems.

94. (C) Rajasthan
The Arvari Pani Sansad is a famous community-led watershed and river revival initiative located in the Alwar district of Rajasthan. This

Click Here to Buy book on Amazon

project involved building numerous small earthen dams, or johads, to harvest rainwater and recharge groundwater. Through collective management by local villagers, the seasonal Arvari River was transformed into a perennial stream, demonstrating the power of indigenous traditional knowledge.

95. (B) Ministry of Jal Shakti
The Central Ground Water Board operates under the jurisdiction of the Ministry of Jal Shakti. Its primary responsibilities include the scientific assessment, monitoring, and management of India's groundwater resources. The board provides technical expertise to state governments and implements various schemes aimed at sustainable groundwater extraction and artificial recharge to ensure the long-term availability of water for different sectors.

96. (B) They are highly effective in areas with dense, impermeable clay soils.
The statement that percolation tanks are highly effective in areas with dense, impermeable clay soils is incorrect. These tanks require permeable land to allow surface water to seep down and recharge the underlying aquifers. In impermeable clay soils, water cannot penetrate effectively, rendering the process inefficient. Therefore, they are best suited for regions with fractured rocks or sandy soils.

97. (D) Mineral Conservation and Development Rules (MCDR)
The Mineral Conservation and Development Rules primarily obligate mining companies in India to implement a Progressive Mine Closure Plan. This regulation ensures that mining sites are restored and rehabilitated in a phased manner throughout the life of the mine, rather than only at the end. The goal is to minimize long-term environmental damage and ensure the land is rehabilitated.

98. (B) 1956
The Inter-State River Water Disputes Act was enacted by the Indian Parliament in 1956 under the provisions of Article 262 of the Constitution. This act provides a legal framework for the adjudication of disputes between states regarding the use, distribution, and control of waters of inter-state rivers. It allows for the establishment of ad-hoc tribunals to resolve conflicts effectively.

NODIA

99. (B) Tankas
In the arid regions of Rajasthan, traditional underground tanks built for storing harvested rainwater are locally known as tankas. These structures are designed to provide clean drinking water throughout the dry season. They are typically circular pits lined with lime or cement to prevent seepage. This indigenous technology has been a vital survival mechanism for communities facing chronic water scarcity.

100. (C) Brahmaputra Basin
The Brahmaputra basin records the highest per capita water availability in India due to high annual rainfall and a relatively low population density in its catchment area. The river carries a massive volume of water, especially during the monsoon season. However, much of this water remains unutilized because of the region's difficult terrain and the seasonal nature of flow.

101. (A) Drinking water, Irrigation, and Hydropower
The National Water Policy of 2002 explicitly recommends a priority sequence for water allocation, placing drinking water at the top. This is followed by irrigation, hydropower, and industrial use. This hierarchy ensures that basic human needs and food security are prioritized over commercial requirements. The policy provides a guideline for states to manage their water resources during times of scarcity.

102. (A) Agricultural sector
The agricultural sector is the largest consumer of both surface water and groundwater in India, accounting for over 80 percent of total water use. This high consumption is primarily due to the widespread practice of flood irrigation in water-intensive crops like rice and sugarcane. Sustainable water management in this sector is essential to address the growing national water crisis.

103. (B) Constitution of Water Dispute Tribunals
Under the 1956 Inter-State River Water Disputes Act, the mechanism adopted to resolve disputes when negotiations fail is the constitution of specialized Water Dispute Tribunals. These ad-hoc bodies are formed by the central government to investigate and adjudicate specific river water conflicts between states. The decisions of these tribunals are final and binding, providing a legal resolution to complex issues.

104. (D) Leaching of arsenic due to over-extraction
The primary cause of widespread arsenic contamination in the Ganga-Brahmaputra plains is the leaching of naturally occurring arsenic from sediments due to excessive groundwater extraction. As water tables drop, chemical changes in the aquifer can release arsenic into the water supply. This poses a serious public health risk, as long-term exposure to contaminated water leads to various chronic skin diseases.

105. (C) Slow flow, reduce erosion, and enhance percolation
The primary function of a check dam in water conservation is to slow down the flow of water in a stream or channel. This reduction in velocity helps to decrease soil erosion and increases the time available for water to percolate into the ground. Consequently, check dams are highly effective in recharging local groundwater tables and sustaining water levels.

106. (B) Meghalaya
Rat-hole mining was a prevalent but hazardous coal mining practice in Meghalaya before it was banned by the National Green Tribunal. This method involves digging narrow horizontal tunnels into hillsides to extract coal seams. It posed significant risks to miners and caused severe environmental damage, including the acidification of local rivers. The ban aimed to protect both life and ecosystems.

107. (A) Andhra Pradesh
The Neeru-Meeru programme was a successful water conservation initiative launched by the government of Andhra Pradesh. It focused on large-scale community participation to build and maintain various water-harvesting structures like check dams and percolation tanks. The goal was to improve groundwater levels and ensure the sustainable management of water resources in drought-prone areas through the integrated efforts of departments.

108. (A) I, II, III, IV
The Ganga basin has the highest total utilizable surface water resources in India, followed by the Godavari, Krishna, and Mahanadi basins. This order is determined by the total annual flow and the storage capacity developed in each basin. While the Ganga provides vast water for the northern plains, the peninsular rivers are vital for irrigation and power in southern states.

109. (D) P-1, Q-2, R-3, S-4
Traditional rainwater harvesting systems are adapted to local environments: Johads are common in Rajasthan, Eris are used in Tamil Nadu, Khatris are typical in Himachal Pradesh, and Zings are found in Ladakh. These indigenous methods demonstrate how various communities have historically managed water scarcity by tailoring their storage and conservation techniques to the specific topographical and climatic conditions.

110. (A) Article 262
Article 262 of the Indian Constitution specifically provides for the adjudication of disputes relating to the waters of inter-state rivers or river valleys. It empowers Parliament to enact laws to resolve such conflicts and even exclude the jurisdiction of the Supreme Court in these matters. This constitutional provision led to the enactment of the Inter-State River Water Disputes Act.

111. (D) Hilly and sloping terrains
Contour bunding is a soil and water conservation technique most suitable for hilly and sloping terrains. It involves constructing small embankments across the slope along the contours of the land. These bunds help to break the flow of surface runoff, reducing soil erosion and allowing more time for rainwater to infiltrate the soil. This practice is essential for sustainable agriculture.

112. (B) P-4, Q-1, R-2, S-3
The Mahadayi tribunal involves Goa, Karnataka, and Maharashtra, while the Ravi-Beas tribunal involves Punjab, Haryana, and Rajasthan. The Vansadhara tribunal resolves issues between Odisha and Andhra Pradesh, and the Cauvery tribunal manages disputes among Karnataka, Kerala, Tamil Nadu, and Puducherry. These tribunals are critical for providing legal frameworks to share river water resources among states with competing agricultural and industrial demands.

NODIA

113. (C) North-Western states of Punjab and Haryana
The North-Western states of Punjab and Haryana are characterized by the highest levels of groundwater over-exploitation in India. This

is primarily due to intensive agriculture and the cultivation of water-demanding crops like paddy, supported by subsidized electricity for pumping. The resulting rapid decline in water tables poses a significant threat to long-term food security and environmental sustainability in this region.

114. (B) Gram Panchayats
The Hariyali watershed development project is a central government initiative executed primarily through the active participation of Gram Panchayats. It aims to empower local communities to manage their land and water resources more effectively. By involving village-level institutions, the project ensures that conservation efforts are tailored to local needs, promoting sustainable development and improving the livelihoods of rural populations.

115. (D) Madhya Pradesh, Gujarat, Maharashtra, Rajasthan
The Narmada Water Disputes Tribunal was established to resolve conflicts among the states of Madhya Pradesh, Gujarat, Maharashtra, and Rajasthan. The dispute primarily concerned the sharing of water and the construction of the Sardar Sarovar Dam. The tribunal's award provided a comprehensive framework for water allocation and power sharing, which was essential for the multi-purpose development of the basin.

116. (B) 4 percent
India accounts for approximately 18 percent of the global population but possesses only about 4 percent of the world's freshwater resources. This stark imbalance highlights the critical challenge of water security in the country. With rising demand from a growing population and expanding industrial and agricultural sectors, the need for efficient water management, conservation, and pollution control becomes increasingly urgent.

117. (D) Judicious use of resources within a basin
The fundamental approach of a watershed development programme is the judicious and integrated use of all natural resources within a drainage basin. It focuses on the conservation of soil, water, and vegetation to improve the overall productivity of the landscape. By managing the ecosystem as a single unit, these programmes aim to enhance groundwater recharge and ensure sustainable livelihoods.

118. (D) Narmada
The Narmada is a major west-flowing river that forms a vital part of the water resources of Madhya Pradesh. It originates from the Amarkantak plateau and flows through a rift valley before draining into the Arabian Sea. The river is the lifeline of the state, providing water for irrigation, domestic use, and large-scale hydroelectric power generation through several projects.

119. (A) Higher groundwater table and diluted pollutants
Modern rainwater harvesting techniques like recharge pits provide significant long-term ecological benefits by raising the groundwater table and diluting accumulated pollutants. By directing rainwater into deep aquifers, these structures replenish water levels that have been depleted by over-extraction. This process also improves the overall quality of groundwater by reducing the concentration of salts and contaminants through natural filtration processes.

120. (A) Extraction exceeds annual replenishable recharge
In groundwater assessment terminology, a "Dark Block" signifies an area where the annual extraction of groundwater exceeds the annual replenishable recharge. This condition leads to a continuous decline in the water table, threatening the sustainability of water supplies. Identifying these blocks is crucial for implementing regulatory measures to restrict further extraction and for promoting artificial groundwater recharge initiatives nationwide.

121. (B) 2014
The Namami Gange Programme is an integrated conservation mission approved by the Union Government in 2014. It was launched with the twin objectives of effective abatement of pollution and the rejuvenation of the National River Ganga. The program operates under the Ministry of Jal Shakti and involves activities like sewage treatment infrastructure, river-front development, and biodiversity conservation across several states.

Downloaded from www.pdf.tube

122. (D) State Water Regulatory Authority
The National Water Policy of 2012 recommends that each state establish a State Water Regulatory Authority to determine water tariffs and ensure the equitable distribution of resources. This body is intended to operate independently to set fair pricing for different water users, which encourages conservation and efficient usage. By regulating tariffs, the authority helps in the sustainable management of resources.

123. (C) 2012
The most recent comprehensive National Water Policy of India was adopted in 2012, replacing the earlier 1987 and 2002 policies. This framework emphasizes treating water as an economic good to promote its conservation and efficient use. It also highlights the need for a unified legal framework for water management and the establishment of regulatory authorities at the state level.

124. (B) Fifth Schedule
The Fifth Schedule of the Indian Constitution contains provisions that restrict the transfer of tribal land to non-tribals, a critical issue in mineral-rich tribal regions. These areas, often referred to as Scheduled Areas, are granted special protections to safeguard the interests and culture of indigenous communities. This legal framework ensures that tribal groups maintain control over their traditional lands.

125. (C) Dissolved oxygen
Eutrophication occurs when excessive nutrient runoff, often from fertilizers, causes rapid algal growth in water bodies. As these algae eventually die and decompose, bacteria consume large amounts of oxygen in the process. This leads to a hazardous decrease in dissolved oxygen levels, which can result in the mass death of fish and other aquatic organisms, severely disrupting the local ecosystem.

126. (A) Economic pricing to ensure conservation
The National Water Policy of 2012 heavily emphasized the concept of economic pricing for water to ensure its conservation and sustainable use. By valuing water as a finite resource rather than a free commodity, the policy aimed to discourage wastage across domestic, industrial, and agricultural sectors. This approach supports the establishment of regulatory bodies to manage water tariffs efficiently.

127. (B) Inter-linking of Peninsular Rivers
The inter-linking of peninsular rivers is not one of the main pillars of the Namami Gange Programme. Instead, the mission focuses on pollution abatement through sewerage treatment infrastructure, river-front development, and river surface cleaning. It also emphasizes biodiversity conservation, afforestation, and public awareness as key strategies for rejuvenation. These pillars collectively address the diverse environmental challenges facing the river.

128. (D) Highly polluted with organic matter
A high Biological Oxygen Demand in a river indicates that the water is highly polluted with organic matter. BOD measures the amount of oxygen required by aerobic microorganisms to break down organic substances in the water. Therefore, a high BOD level suggests that there is a large amount of waste, which depletes dissolved oxygen and harms various aquatic lifeforms.

129. (B) Agricultural runoff laden with fertilizers
Agricultural runoff is classified as a non-point source of pollution because it originates from a wide, diffuse area rather than a single identifiable location. In contrast, effluent discharge from a factory, sewage from a treatment plant, and drainage from a specific mine are considered point sources. Managing non-point pollution is generally more challenging due to its widespread and varied nature.

130. (A) I, II, III, and V only
India recently identified 30 critical minerals, including lithium and nickel, which are essential for national security and green technologies like electric vehicles. To secure these supplies, Khanij Bidesh India Ltd. was established to acquire assets abroad. However, India is not currently self-sufficient in these minerals and relies heavily on imports to meet its growing technological and industrial needs.

NODIA

CHAPTER 06

Energy Resources : Conventional and Non Conventional

1. Identify the incorrect statement regarding the types of coal found in India.
(A) Anthracite has the highest carbon content and is predominantly found in Jammu and Kashmir.
(B) Bituminous coal is the most widely used commercial coal in India.
(C) Lignite has a high moisture content and is primarily mined in Neyveli, Tamil Nadu.
(D) Peat represents the final stage of coal formation and possesses the highest heating value.

2. Identify the incorrect statement regarding major oil fields in India.
(A) Mumbai High was officially discovered by the ONGC in 1974
(B) Aishwarya oil field is situated within the desert state of Rajasthan
(C) The Naharkatiya oil field is located in the offshore region of Gujarat
(D) Digboi represents the oldest continuously operating oil well in India

3. Identify the correct statement regarding the classification of energy resources in India.
(A) Firewood and animal dung are classified as commercial conventional energy resources.
(B) Thermal power generated from coal is categorized as a non-conventional energy source.
(C) Solar, wind, and tidal energy are classified as commercial non-conventional resources.
(D) Hydroelectricity is universally classified strictly as a non-conventional energy source.

4. Which of the following is the correct sequence of major oil refineries in India from North to South?
(A) Mathura, Panipat, Bina, Kochi
(B) Panipat, Mathura, Bina, Kochi
(C) Panipat, Bina, Mathura, Kochi
(D) Mathura, Bina, Panipat, Kochi

5. Which of the following is the largest thermal power station in India by installed capacity, located in Madhya Pradesh?
(A) Satpura Thermal Power Station
(B) Vindhyachal Super Thermal Power Station
(C) Sanjay Gandhi Thermal Power Station
(D) Shree Singaji Thermal Power Project

6. Identify the correct statement regarding Coal Bed Methane (CBM) potential in Madhya Pradesh.
(A) Madhya Pradesh completely lacks any proven CBM reserves due to the absence of Gondwana rocks.
(B) The Sohagpur coalfield in Madhya Pradesh has significant commercial CBM reserves.
(C) CBM extraction in Madhya Pradesh is exclusively reserved for foreign private corporations.
(D) The Singrauli coalfield yields CBM that is primarily composed of carbon dioxide.

7. Which of the following best defines non-conventional energy resources?
(A) Traditional resources used for centuries forming the bulk of global consumption
(B) Naturally replenished resources characterized by a lower environmental impact
(C) Resources extracted primarily from prehistoric fossilized organic matter
(D) Non-renewable resources that emit no greenhouse gases during combustion

8. Identify the correct statement regarding petroleum reserves in India.
(A) Over 80 percent of India's crude oil requirement is met through domestic

Click Here to Buy book on Amazon

production.
(B) The largest share of domestic crude oil production comes from offshore fields.
(C) Most of India's petroleum reserves are associated with igneous and metamorphic rock formations.
(D) India exports more unrefined crude oil than it imports.

9. The Bina Oil Refinery in Madhya Pradesh was established as a joint venture involving the Bharat Petroleum Corporation Limited (BPCL) and which other entity?
(A) Saudi Aramco
(B) Oman Oil Company
(C) Rosneft
(D) Petronas

10. Identify the correct option after considering the following statements about coal reserves in India:
Statement I: Gondwana coal fields account for more than 90 percent of the total coal reserves in India.
Statement II: Tertiary coal fields are primarily located in the peninsular plateau region.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

11. Consider the following statements regarding hydroelectric power in India:
I. Hydro power is categorized as a renewable energy source.
II. Pumped storage projects act as giant batteries for grid stability.
III. Small hydro projects have a capacity limit of up to 25 MW in India.
IV. Run-of-the-river projects generally do not require large storage reservoirs.
V. India utilizes over 90% of its total estimated hydroelectric potential.
Which of the above statement(s) is/are correct?
(A) I, II, III and V only
(B) II, III, IV and V only
(C) I, III, IV and V only
(D) I, II, III and IV only

12. Which of the following strategies is the most appropriate approach for India to enhance its energy security and reduce import dependence?
(A) Increasing domestic coal extraction exclusively while ignoring environmental norms
(B) Banning all petroleum and natural gas imports to force immediate industrial innovation
(C) Scaling up renewable installations and diversifying the mix through efficiency measures
(D) Shifting all industrial manufacturing processes to traditional forms of biomass energy

13. Identify the correct option after considering the following statements regarding the petroleum sector:
Statement I: India is highly dependent on imports for crude oil.
Statement II: India is a net exporter of refined petroleum products.
(A) Both Statement I and Statement II are correct
(B) Both Statement I and Statement II are incorrect
(C) Statement I is correct, but Statement II is incorrect
(D) Statement I is incorrect, but Statement II is correct

14. What is the primary cause of fly ash generation in conventional thermal power plants?
(A) The utilization of heavy water in the reactor core
(B) The condensation of high-pressure steam in the cooling towers
(C) The combustion of high-ash content pulverized coal
(D) The chemical reaction between sulphur dioxide and limestone in scrubbers

15. Which regulatory body is responsible for regulating the refining, processing, storage, and distribution of natural gas in India?
(A) Bureau of Energy Efficiency (BEE)
(B) Petroleum Conservation Research Association (PCRA)
(C) Central Electricity Regulatory Commission (CERC)

NODIA

(D) Petroleum and Natural Gas Regulatory Board (PNGRB)

16. Which of the following energy sources is the odd one out based on the standard classification of conventional and non-conventional resources?
(A) Wind Energy
(B) Coal
(C) Petroleum
(D) Natural Gas

17. Which of the following public sector oil refineries is the odd one out because it is an inland refinery rather than a coastal one?
(A) Mathura Refinery
(B) Mangalore Refinery
(C) Paradip Refinery
(D) Haldia Refinery

18. Which region in Madhya Pradesh is famous for possessing the thickest coal seam in India?
(A) Singrauli
(B) Pathakhera
(C) Umaria
(D) Mohpani

19. Consider the following statements about major oil and gas fields in India:
I. The Barmer-Sanchor basin is known for the Mangala oil field.
II. Mumbai High operations are supported by a drilling platform called Sagar Samrat.
III. Moran-Hugrijan is a prominent oil field located in Gujarat.
IV. Aliabet is an offshore oil field situated in the Gulf of Khambhat.
Which of the above statement(s) is/are correct?
(A) I, II and III only
(B) II, III and IV only
(C) I, III and IV only
(D) I, II and IV only

20. Match List I with List II and select the correct answer using the codes given below:
List I: (Major Oil Fields)
P. Digboi
Q. Ankleshwar
R. Mangala
S. Mumbai High
List II: (State/Region)
1. Rajasthan
2. Arabian Sea
3. Assam
4. Gujarat
Codes:
(A) P-3, Q-4, R-1, S-2
(B) P-3, Q-1, R-4, S-2
(C) P-4, Q-3, R-1, S-2
(D) P-2, Q-4, R-1, S-3

21. Which river basin in India has the highest economically exploitable hydroelectric power potential?
(A) Ganga Basin
(B) Indus Basin
(C) Brahmaputra Basin
(D) Godavari Basin

22. Which of the following fuel types accounts for the largest share of India's energy import bill?
(A) Coal
(B) Crude Oil
(C) Natural Gas
(D) Uranium

23. What is the fundamental working principle behind a conventional coal-based thermal power plant?
(A) Using a dynamo to convert mechanical energy directly into thermal energy
(B) Applying the photovoltaic effect to convert heat radiation into electricity
(C) Splitting water thermochemically to release hydrogen for fuel cell usage
(D) Using coal-generated steam to drive turbines that produce electrical energy

24. Which of the following is the largest oil refinery in India in terms of installed capacity?
(A) Panipat Refinery
(B) Kochi Refinery
(C) Mathura Refinery
(D) Jamnagar Refinery

25. Which basin holds the largest proven natural gas reserves in India?
(A) Cauvery Basin
(B) Krishna-Godavari Basin
(C) Cambay Basin
(D) Vindhyan Basin

Downloaded from www.pdf.tube

STUDYING FROM PDFs?

THINK AGAIN.

If you are studying only from PDFs,
you are wasting valuable time.

Research shows that learning from

PRINTED BOOKS has up to

4× HIGHER RETENTION

than studying from screens.

PRINT BOOK = BETTER MEMORY

PDF = LOWER RETENTION

Those who study from **PRINTED BOOKS**
move **AHEAD.**

Others are left **BEHIND**
in competition.

In competitive exams,
being average is not enough.

STAY ONE STEP AHEAD.

26. In the context of India's development, which of the following best describes the concept of energy security?
(A) The strategy of eliminating all energy imports to rely solely on domestic coal
(B) The transition of the national power grid to nuclear energy to stop fuel depletion
(C) The strategic hoarding of imported crude oil to manipulate global market prices
(D) Providing affordable, reliable energy while maintaining environmental sustainability

27. The famous HVJ pipeline, a major natural gas distribution network in India, connects Hazira and Jagdishpur through which location in Madhya Pradesh?
(A) Vijaipur
(B) Bhopal
(C) Jabalpur
(D) Gwalior

28. Consider the following statements regarding coal production in India:
I. Jharkhand has the highest proven coal reserves in India.
II. Madhya Pradesh ranks first in overall coal production in the country.
III. The Sohagpur coalfield is the largest coalfield in Madhya Pradesh.
Which of the above statement(s) is/are correct?
(A) I and III only
(B) I and II only
(C) II and III only
(D) I, II and III

29. What is the primary reason why many oil refineries in India are located near coastal regions rather than near inland crude extraction sites?
(A) Coastal areas have lower ambient temperatures required for the refining process
(B) Refining processes require direct use of saline seawater to crack hydrocarbons
(C) The high dependence on imported crude oil makes coastal locations logistically advantageous
(D) Inland areas strictly prohibit the establishment of highly polluting industries

30. All of the following are Ultra Mega Power Projects (UMPPs) awarded in India, except:
(A) Sasan UMPP
(B) Mundra UMPP
(C) Krishnapatnam UMPP
(D) Kudankulam UMPP

31. Identify the correct statement regarding thorium reserves in India.
(A) Thorium is highly concentrated in the Gondwana coal beds of central India.
(B) India has negligible reserves of thorium and relies entirely on imports.
(C) Thorium is found abundantly in the monazite sands along the Kerala coast.
(D) Thorium extraction in India is predominantly carried out in the Himalayan region.

32. Identify the incorrect statement regarding the environmental mitigation technologies used in thermal power plants.
(A) Electrostatic precipitators are used to remove particulate matter from flue gases.
(B) Carbon sequestration completely eliminates the creation of carbon dioxide during coal combustion.
(C) Flue-gas desulfurization (FGD) systems are installed to capture sulphur dioxide emissions.
(D) Selective catalytic reduction is utilized to minimize nitrogen oxide emissions.

NODIA

33. What is a primary environmental advantage of run-of-the-river hydroelectric projects compared to large dam projects?
(A) They produce higher carbon emissions to offset local cooling
(B) They cause minimal submergence of land and displacement of populations
(C) They permanently alter the downstream temperature of the river
(D) They require the complete diversion of the river into a closed pipeline

34. Match List I with List II and select the correct answer using the codes given below:
List I: (Solar Project/Scheme)
P. Bhadla Solar Park
Q. PM KUSUM
R. Rewa Ultra Mega Solar
S. Omkareshwar Project

(B) To utilize recycled coal ash as a moderator to decrease the speed of neutrons
(C) To breed fissile Plutonium-239 while converting Thorium into Uranium-233
(D) To provide a secure method for storing radioactive waste deep within the earth

54. Identify the correct option after considering the following statements regarding solar photovoltaics (PV):
Statement I: Solar PV cells convert solar radiation directly into direct current (DC) electricity.
Statement II: Inverters are not required in grid-connected solar power systems.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

55. Thermal power plants often discharge hot water into nearby water bodies. What is the most significant environmental consequence of this thermal pollution?
(A) It reduces the dissolved oxygen in the water, harming aquatic life.
(B) It increases the dissolved oxygen content, leading to excessive fish growth.
(C) It causes an immediate increase in local salinity levels.
(D) It purifies the water by instantly killing all harmful heavy metals.

56. Which of the following is the highest dam in India, featuring a major hydroelectric power plant?
(A) Tehri Dam
(B) Bhakra Dam
(C) Hirakud Dam
(D) Sardar Sarovar Dam

57. Identify the correct statement regarding the National Solar Mission of India.
(A) It is a major component of India's National Action Plan on Climate Change (NAPCC).
(B) It was launched originally with a target to achieve 100 GW of solar power by 2015.
(C) It explicitly prohibits Foreign Direct Investment (FDI) in solar panel manufacturing.
(D) It focuses exclusively on off-grid solar solutions for rural areas.

58. Consider the following statements regarding India's three-stage nuclear power programme:
I. The first stage utilizes Pressurized Heavy Water Reactors (PHWRs) fueled by natural uranium.
II. The second stage aims to use Fast Breeder Reactors (FBRs) utilizing plutonium-239.
III. The third stage is designed exclusively to utilize highly enriched imported uranium.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II and III

59. Which geographical region in India receives the highest average daily solar insolation, making it highly suitable for solar power generation?
(A) The Konkan Coast
(B) The Brahmaputra Valley
(C) Western Rajasthan and Gujarat
(D) The Kashmir Valley

60. The Kudankulam Nuclear Power Plant, currently India's largest nuclear power station, was built with the technical assistance of which country?
(A) United States of America
(B) Russia
(C) France
(D) Japan

61. Identify the correct statement regarding offshore wind energy development in India.
(A) The cost of installing and maintaining offshore wind turbines is significantly lower than onshore turbines.
(B) India has already installed over 10 GW of operational offshore wind capacity as of 2022.
(C) Offshore wind farms face fewer space constraints compared to onshore wind farms.
(D) The wind speeds offshore are generally much lower and more turbulent than onshore wind speeds.

62. Identify the correct option after considering the following statements regarding biogas production:
Statement I: The slurry left behind after biogas

Click Here to Buy book on Amazon

(C) P-4, Q-3, R-2, S-1
(D) P-2, Q-3, R-4, S-1

43. Which major gaseous pollutant emitted by conventional coal thermal power plants is primarily responsible for acid rain?
(A) Methane
(B) Sulphur dioxide
(C) Chlorofluorocarbons
(D) Ozone

44. Which was the first commercial nuclear power station established in India?
(A) Rawatbhata
(B) Kakrapar
(C) Narora
(D) Tarapur

45. The Rewa Ultra Mega Solar project in Madhya Pradesh has an installed capacity of:
(A) 250 MW
(B) 500 MW
(C) 750 MW
(D) 1000 MW

46. Which state receives the highest share of power generated from the Sardar Sarovar Hydroelectric Project?
(A) Gujarat
(B) Madhya Pradesh
(C) Maharashtra
(D) Rajasthan

47. What is the primary objective of the PM KUSUM (Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan) scheme?
(A) To offer free electricity to all urban households through rooftop solar technology
(B) To provide farmers with solar pumps and grid-connected renewable power plants
(C) To nationalize all private solar installations currently operating in the country
(D) To replace all coal-fired power stations with massive solar energy parks by 2025

48. Where is the proposed nuclear power plant in Madhya Pradesh located?
(A) Punasa, Khandwa district
(B) Chutka, Mandla district
(C) Barela, Jabalpur district
(D) Sasan, Singrauli district

49. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option:
Assertion (A): Fly ash generated by thermal power plants can be widely utilized in the manufacturing of Portland cement.
Reason (R): Fly ash contains pozzolanic materials that react with calcium hydroxide to form cementitious compounds.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

50. Arrange the following nuclear power plants in the correct geographical order from North to South:
I. Kaiga
II. Narora
III. Kudankulam
IV. Kakrapar
(A) II, IV, I, III
(B) II, I, IV, III
(C) IV, II, I, III
(D) II, IV, III, I

51. Which of the following solar parks currently holds the status of being the largest solar park in the world by capacity?
(A) Pavagada Solar Park
(B) Kurnool Ultra Mega Solar Park
(C) Kamuthi Solar Power Project
(D) Bhadla Solar Park

52. The Tummalapalle mine, which possesses one of the largest reserves of uranium in India, is located in which state?
(A) Jharkhand
(B) Meghalaya
(C) Rajasthan
(D) Andhra Pradesh

53. What is the primary purpose of the second stage of India's nuclear programme involving Fast Breeder Reactors?
(A) To facilitate the direct conversion of Thorium-232 into Uranium-238 isotopes

Downloaded from www.pdf.tube

(C) Cotton
(D) Bamboo

91. Identify the correct option after considering the following statements about the Perform, Achieve and Trade (PAT) scheme:
Statement I: It aims to improve energy efficiency in energy-intensive industries.
Statement II: Industries that overachieve their energy saving targets are issued Energy Saving Certificates (ESCerts).
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

92. In which year was the International Solar Alliance (ISA) launched?
(A) 2012
(B) 2015
(C) 2018
(D) 2021

93. A hydrogen fuel cell generates electricity by combining hydrogen with which element, resulting in water as the only byproduct?
(A) Carbon
(B) Nitrogen
(C) Oxygen
(D) Helium

94. Match List I with List II and select the correct answer using the codes given below:
List I: (Energy Storage/Grid Technology)
P. Pumped Storage Hydropower
Q. Lithium-ion Batteries
R. Smart Meters
S. Net Metering
List II: (Description)
1. Two-way communication of energy usage
2. Electrochemical energy storage
3. Billing mechanism for rooftop solar
4. Mechanical energy storage using water
Codes:
(A) P-4, Q-2, R-3, S-1
(B) P-2, Q-4, R-1, S-3
(C) P-4, Q-2, R-1, S-3
(D) P-1, Q-2, R-4, S-3

95. As part of its updated climate commitments, India aims to achieve a non-fossil fuel installed electricity capacity of 500 GW by which year?
(A) 250 MW
(B) 500 MW
(C) 750 MW
(D) 1000 MW

96. In the context of rural electrification, Madhya Pradesh achieved a significant milestone under the Saubhagya scheme. What does this milestone indicate?
(A) Madhya Pradesh was the last state to implement the scheme
(B) The state achieved 100% electrification of willing un-electrified households
(C) The state completely dismantled its coal plants to rely on solar micro-grids
(D) The state restricted rural electrification strictly to agricultural pumps

NODIA

97. In the context of hydrogen energy terminology, what defines "Green Hydrogen"?
(A) Hydrogen extracted from natural gas using carbon capture and storage technology
(B) Hydrogen produced through coal gasification without any carbon capture mechanism
(C) Hydrogen derived organically from processed green leafy vegetable matter
(D) Hydrogen produced from water electrolysis powered by renewable energy sources

98. Where is the headquarters of the International Solar Alliance (ISA) located?
(A) Gurugram, India
(B) Geneva, Switzerland
(C) Paris, France
(D) New York, USA

99. What is the most significant challenge in the trajectory toward a high-renewable energy mix in India's power grid?
(A) The complete lack of barren land available for utility-scale solar park sites
(B) The intermittent nature of solar and wind requiring robust energy storage
(C) The technological inability to connect solar panels to the existing power grid
(D) A total ban on all foreign investment directed toward the green energy sector

production is a rich organic fertilizer.
Statement II: Biogas generation requires a continuous supply of atmospheric oxygen.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

63. Which Indian state currently leads in cumulative installed wind power capacity?
(A) Tamil Nadu
(B) Gujarat
(C) Maharashtra
(D) Rajasthan

64. Which of the following represents the correct sequence of energy transformation steps in an Ocean Thermal Energy Conversion (OTEC) closed-cycle system?
(A) Warm water vaporizes working fluid > Vapor turns turbine > Turbine runs generator > Cold water condenses vapor
(B) Cold water vaporizes working fluid > Vapor turns turbine > Turbine runs generator > Warm water condenses vapor
(C) Warm water directly turns turbine > Turbine vaporizes fluid > Generator condenses vapor
(D) Cold water condenses fluid > Fluid turns generator > Generator vaporizes water > Warm water turns turbine

65. Identify the correct option after considering the following statements about small hydropower projects:
Statement I: Small hydropower projects are heavily dependent on massive dams and large reservoirs.
Statement II: They have a minimal environmental footprint and shorter gestation periods.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

66. Tattapani, a well-known potential site for geothermal energy generation in central India, is located in:
(A) Chhattisgarh
(B) Madhya Pradesh
(C) Jharkhand
(D) Maharashtra

67. What is a fundamental limitation or requirement for installing commercial wind energy farms?
(A) The turbines must be installed below sea level for maximum aerodynamic efficiency.
(B) The area must be heavily forested to channel wind directly to the turbine blades.
(C) The area must have a minimum average wind speed of roughly 6-8 meters per second.
(D) Wind turbines require continuous external power to rotate the blades during calm days.

68. Identify the incorrect statement regarding the use of biomass energy in rural India.
(A) Biomass briquettes can be used as a cleaner alternative to raw firewood.
(B) Traditional biomass combustion in chulhas is highly efficient and pollution-free.
(C) Co-firing biomass pellets in coal thermal plants helps reduce carbon emissions.
(D) Biomass gasifiers can supply electricity to decentralized rural mini-grids.

69. For a tidal power plant to be economically viable, there typically needs to be a minimum tidal range (difference between high and low tide). What is the generally accepted minimum range?
(A) 1 to 2 meters
(B) 3 to 4 meters
(C) 5 to 7 meters
(D) 15 to 20 meters

70. To encourage investment in renewable energy, what is the current limit of Foreign Direct Investment (FDI) allowed under the automatic route for offshore wind energy projects in India?
(A) 49%
(B) 74%
(C) 100%
(D) FDI is not permitted in offshore wind projects

71. Which of the following conditions is essential for forming a commercial hydrothermal system used for geothermal energy?
(A) A heat source, a permeable aquifer, and a cap rock
(B) High-velocity winds, a deep ocean trench,

Click Here to Buy book on Amazon

and high salinity
(C) A large inland reservoir, heavy rainfall, and cold temperatures
(D) High uranium concentration, heavy water, and control rods

72. Identify the correct option after considering the following statements about wind corridors:
Statement I: The Palghat Gap in the Western Ghats acts as a prominent inland wind corridor.
Statement II: The wind speeds in the Palghat Gap region are consistently lower than the surrounding areas.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

73. What is the primary objective of the GOBARdhan (Galvanizing Organic Bio-Agro Resources Dhan) scheme?
(A) To offer direct cash transfers to farmers for purchasing chemical fertilizer products
(B) To export compressed biogas to neighboring nations to earn foreign exchange reserves
(C) To replace local cattle breeds with high-yielding exotic livestock across the country
(D) To convert cattle dung and agricultural waste into biogas and organic manure

74. Which process involves the thermochemical conversion of solid biomass into a combustible gas mixture (producer gas) for energy generation?
(A) Fermentation
(B) Anaerobic digestion
(C) Gasification
(D) Transesterification

75. Puga Valley, known for its significant geothermal energy potential, is located in which region of India?
(A) Himachal Pradesh
(B) Uttarakhand
(C) Sikkim
(D) Ladakh

76. Identify the incorrect statement regarding India's wind energy sector.
(A) India ranks among the top five countries globally in terms of total installed wind power capacity.
(B) Tamil Nadu leads the country in installed wind energy capacity.
(C) Repowering policies have been introduced to replace older, less efficient wind turbines.
(D) The National Institute of Wind Energy (NIWE) is headquartered in New Delhi.

77. Ocean Thermal Energy Conversion (OTEC) technology relies on the temperature difference between the warm surface water and the cold deep water. What is the minimum temperature gradient generally required for OTEC to be operational?
(A) 5°C
(B) 10°C
(C) 20°C
(D) 50°C

78. Why is the potential for electricity generation generally higher in offshore wind projects compared to onshore projects?
(A) Offshore turbines are built smaller to allow for much faster blade rotation
(B) Saltwater spray enhances the electrical conductivity of generating components
(C) Offshore turbines use tidal currents to provide supplementary blade movement
(D) Marine locations offer stronger, more consistent, and less turbulent wind streams

NODIA

79. Consider the following statements regarding tidal energy potential in India:
I. Tidal energy relies on the gravitational pull of the Moon and the Sun.
II. The Gulf of Khambhat has the highest tidal energy potential in India.
III. The Gulf of Kutch is considered unviable for tidal energy extraction.
IV. The Sundarbans region in West Bengal has viable tidal energy potential.
V. Tidal energy is completely unaffected by day-night weather changes.
Which of the above statement(s) is/are correct?
(A) I, II and IV only
(B) I, II, IV and V only
(C) II, III and V only
(D) I, III, IV and V only

80. Match List I with List II and select the correct answer using the codes given below:

List I: (Biomass Source)
P. Rice husk
Q. Bagasse
R. Municipal Solid Waste
S. Forest residues
List II: (Associated Sector)
1. Sugar Industry
2. Urban local bodies
3. Agriculture/Paddy milling
4. Silviculture/Timber logging
Codes:
(A) P-1, Q-3, R-2, S-4
(B) P-3, Q-2, R-1, S-4
(C) P-4, Q-1, R-2, S-3
(D) P-3, Q-1, R-2, S-4

81. Identify the correct option after considering the following statements about geothermal energy:
Statement I: It relies on the heat emanating from the Earth's interior.
Statement II: Geothermal power plants are highly intermittent, producing power only during the daytime.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

82. Which of the following states is the odd one out regarding significant wind energy potential in India?
(A) Assam
(B) Gujarat
(C) Karnataka
(D) Maharashtra

83. Which of the following pairs correctly represents the distinction within small hydropower projects?
(A) Micro Hydel - up to 100 kW
(B) Mini Hydel - between 2 MW and 5 MW
(C) Small Hydel - between 25 MW and 50 MW
(D) Pico Hydel - up to 500 kW

84. Identify the correct statement regarding marine energy in India.
(A) India heavily depends on tidal energy, which contributes to 15% of its energy mix.
(B) Ocean Thermal Energy Conversion (OTEC) requires a massive temperature difference between coastal air and land.
(C) The Ministry of New and Renewable Energy has classified tidal, wave, and OTEC as renewable energy sources.
(D) Wave energy is predominantly harnessed in the inland lakes of central India.

85. Biogas is produced through the anaerobic digestion of organic matter. What is the primary combustible component of biogas?
(A) Carbon dioxide
(B) Hydrogen sulfide
(C) Methane
(D) Nitrogen

86. In Madhya Pradesh, the Jamgodrani Hills are known for their significant wind energy installations. In which district are they located?
(A) Indore
(B) Dewas
(C) Ujjain
(D) Ratlam

87. India's first experimental wave energy project was set up in 1991 at which of the following locations?
(A) Kandla, Gujarat
(B) Vizhinjam, Kerala
(C) Paradip, Odisha
(D) Tuticorin, Tamil Nadu

88. In India, what is the maximum installed capacity limit for a hydroelectric project to be classified as a "Small Hydropower" (SHP) project?
(A) 5 MW
(B) 15 MW
(C) 25 MW
(D) 100 MW

89. Which of the following regions possesses the highest theoretical potential for tidal energy generation in India?
(A) Gulf of Mannar
(B) Gulf of Khambhat
(C) Palk Strait
(D) Chilika Lake

90. Bagasse, a major source of biomass energy in India, is a fibrous residue left over after the extraction of juice from which crop?
(A) Sugarcane
(B) Jute

Downloaded from www.pdf.tube

List II: (Key Feature/Location)
1. Floating solar capacity
2. Largest solar park in India
3. Provides power to Delhi Metro
4. Solarization of agricultural pumps

Codes:
(A) P-3, Q-4, R-2, S-1
(B) P-2, Q-1, R-3, S-4
(C) P-4, Q-2, R-1, S-3
(D) P-2, Q-4, R-3, S-1

35. Why is Thorium not directly used as a fuel in the first stage of India's nuclear power programme?
(A) It is fertile rather than fissile and cannot sustain a chain reaction alone
(B) It is inherently explosive and cannot be safely contained in current reactors
(C) It naturally releases excessive greenhouse gas emissions during nuclear fission
(D) Its domestic reserves are currently depleted and reserved for future use

36. The world's largest proposed floating solar power plant in Madhya Pradesh is being constructed on which dam?
(A) Omkareshwar Dam
(B) Gandhi Sagar Dam
(C) Indira Sagar Dam
(D) Bargi Dam

37. Identify the incorrect pair regarding hydroelectric power stations and their locations.
(A) Nathpa Jhakri - Uttarakhand
(B) Srisailam - Andhra Pradesh
(C) Koyna - Maharashtra
(D) Idukki - Kerala

38. Which of the following elements is primarily manufactured at heavy water plants in India to support the nuclear power sector?
(A) Liquid Sodium
(B) Enriched Uranium
(C) Beryllium
(D) Deuterium Oxide

39. Identify the correct statement about India's solar energy potential.
(A) Solar insolation is uniformly distributed across all states of India.
(B) The highest potential for solar energy strictly lies in regions with heavy annual rainfall.
(C) India receives very limited solar energy due to its location outside the tropics.
(D) India experiences over 300 clear sunny days a year across most of its territory.

40. Identify the correct option after considering the following statements about nuclear energy generation:
Statement I: Nuclear power reactors in India primarily use nuclear fusion to generate heat.
Statement II: Uranium-235 is the fissile isotope utilized in conventional light water reactors.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

41. Consider the following statements about wind energy potential in India:
I. The wind power potential is exceptionally high along the coastline of Gujarat and Tamil Nadu.
II. Inland wind corridors are found in states like Rajasthan and Madhya Pradesh.
III. Wind energy turbines can only function efficiently in regions receiving continuous heavy rainfall.
IV. Wind power generation relies on the kinetic energy of air converting into mechanical power.

Which of the above statement(s) is/are incorrect?
(A) I and II only
(B) III only
(C) III and IV only
(D) I, II and IV only

NODIA

42. Match List I with List II and select the correct answer using the codes given below:
List I: (Hydroelectric Project)
P. Bhakra Nangal
Q. Tehri
R. Salal
S. Ban Sagar

List II: (River)
1. Son
2. Chenab
3. Bhagirathi
4. Sutlej

Codes:
(A) P-3, Q-4, R-1, S-2
(B) P-4, Q-2, R-3, S-1

100. The UJALA scheme aims to replace traditional incandescent bulbs with LED bulbs. Why are LED bulbs considered more energy-efficient?
(A) They operate through miniature nuclear reactions instead of the electrical grid
(B) They capture ambient room heat and convert it into high-intensity illumination
(C) They convert electricity directly into light rather than wasting energy as heat
(D) They contain a glowing filament that retains heat for days without any power

101. Identify the correct option after considering the following statements about rural electrification in India:
Statement I: A village is considered electrified if at least 10% of its households have electricity access.
Statement II: Basic infrastructure like distribution transformers must be provided in the inhabited locality for a village to be classified as electrified.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

102. What is the primary purpose of the Star Labeling program administered by the Bureau of Energy Efficiency (BEE)?
(A) To inform consumers about the energy efficiency of household appliances
(B) To rate the financial profitability of power distribution companies
(C) To measure the aesthetic design quality of electronic devices
(D) To rank states based on their total solar power output

103. Which global initiative was launched by India and the UK at COP26, acting in synergy with the ISA, to create a transnational solar grid?
(A) Sun-Earth Connections
(B) One Sun One World One Grid (OSOWOG)
(C) Global Solar Network (GSN)
(D) International Grid Project (IGP)

104. At the COP26 summit, India announced the 'Panchamrit' strategy. Which of the following is NOT one of the five elements of this strategy?
(A) Achieving Net Zero carbon emissions by 2070
(B) Meeting 50% of energy requirements from renewable energy by 2030
(C) Reaching 500 GW of non-fossil energy capacity by 2030
(D) Phasing out all coal power plants completely by 2025

105. What is the primary objective of the Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya) scheme?
(A) To provide free electricity up to 200 units for all urban households
(B) To distribute free solar panels to all BPL families
(C) To achieve universal household electrification in the country
(D) To lay high-tension underwater power lines connecting offshore islands

106. What is the target production capacity of green hydrogen set by India's National Green Hydrogen Mission by the year 2030?
(A) 1 Million Metric Tonnes (MMT) per annum
(B) 5 Million Metric Tonnes (MMT) per annum
(C) 15 Million Metric Tonnes (MMT) per annum
(D) 50 Million Metric Tonnes (MMT) per annum

107. In the context of the power sector, what defines a "Smart Grid"?
(A) An electrical grid using digital technology to react to local changes in usage
(B) A grid powered exclusively by artificial intelligence without human oversight
(C) A power grid that transmits electricity wirelessly over massive urban distances
(D) A grid that only distributes power to designated metropolitan smart cities

108. Which nodal agency under the Ministry of Power is primarily responsible for implementing the UJALA scheme?
(A) Energy Efficiency Services Limited (EESL)
(B) Power Grid Corporation of India Limited (PGCIL)
(C) National Thermal Power Corporation (NTPC)
(D) Rural Electrification Corporation (REC)

Click Here to Buy book on Amazon

109. Which of the following represents the correct sequence of energy sources in India's current installed power capacity, in decreasing order?
(A) Coal > Renewable Energy > Hydro > Nuclear
(B) Renewable Energy > Coal > Hydro > Nuclear
(C) Coal > Hydro > Renewable Energy > Nuclear
(D) Renewable Energy > Hydro > Coal > Nuclear

110. The target of 500 GW non-fossil energy capacity by 2030 includes power derived from all of the following sources EXCEPT:
(A) Solar Power
(B) Nuclear Power
(C) Clean Coal Technologies
(D) Wind Power

111. Identify the correct statement regarding the Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY).
(A) It aims exclusively at electrifying urban metropolitan slums and townships
(B) It replaces all rural thermal power plants with modular nuclear mini-reactors
(C) It provides free LPG connections to rural households living below poverty lines
(D) It focuses on separating agriculture and non-agriculture power feeders

112. Identify the correct statement regarding the Energy Conservation Building Code (ECBC).
(A) It applies to residential buildings with a connected load of less than 10 kW
(B) It mandates energy standards for new commercial buildings of 100 kW or more
(C) It prohibits modern air conditioning systems in all urban commercial districts
(D) It makes the installation of rooftop wind turbines compulsory for all state offices

113. Identify the incorrect statement regarding the UJALA scheme.
(A) UJALA stands for Unnat Jyoti by Affordable LEDs for All.
(B) It has significantly contributed to reducing India's annual greenhouse gas emissions.
(C) The scheme completely relies on imported LED bulbs, strictly banning domestic manufacturing.
(D) The scheme operates without any direct subsidy allocation from the central government budget.

114. Identify the incorrect pair regarding India's energy transition initiatives.
(A) FAME Scheme - Promotion of Electric Vehicles
(B) PM KUSUM - Subsidizing domestic diesel generators for agriculture
(C) National Green Hydrogen Mission - Decarbonization of heavy industry
(D) UJALA - Energy efficient lighting

115. Identify the correct statement regarding the International Solar Alliance (ISA).
(A) It was jointly launched by India and the United States of America.
(B) Membership is strictly restricted only to countries lying fully between the Tropic of Cancer and the Tropic of Capricorn.
(C) It focuses primarily on deploying solar-powered satellites into space.
(D) Its primary objective is to scale up solar energy applications and reduce the cost of solar technology.

116. The Bureau of Energy Efficiency (BEE) is a statutory body established under which Act?
(A) Environmental Protection Act, 1986
(B) Electricity Act, 2003
(C) National Green Tribunal Act, 2010
(D) Energy Conservation Act, 2001

NODIA

117. Which technology currently accounts for the vast majority of grid-scale energy storage capacity in India?
(A) Lithium-ion Battery Banks
(B) Flywheel Energy Storage
(C) Green Hydrogen Fuel Cells
(D) Pumped Storage Hydropower

118. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option:
Assertion (A): The UJALA scheme has led to a significant reduction in peak electricity demand in India.
Reason (R): The UJALA scheme distributes energy-efficient LED bulbs at heavily subsidized

rates, lowering overall residential power consumption.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

119. Identify the correct statement regarding the current energy mix of India.
(A) Renewable energy (with large hydro) accounts for over 40% of installed capacity
(B) Nuclear power contributes significantly more than 15% to total installed capacity
(C) Natural gas serves as the dominant fuel for electricity generation in South India
(D) Coal's total share in the national installed capacity has fallen below 20%

120. Identify the correct option after considering the following statements regarding India's renewable energy targets:
Statement I: India's updated Nationally Determined Contribution (NDC) aims to reduce the emissions intensity of its GDP by 45% by 2030 from 2005 levels.
Statement II: The 500 GW non-fossil capacity target includes large hydroelectric power projects.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

121. The Petroleum Conservation Research Association (PCRA) operates under the aegis of which central ministry?
(A) Ministry of Petroleum and Natural Gas
(B) Ministry of Environment, Forest and Climate Change
(C) Ministry of Power
(D) Ministry of New and Renewable Energy

122. What is a direct socioeconomic effect of alleviating energy poverty in rural India through clean energy access?
(A) A drastic reduction in local employment opportunities
(B) An increase in the time spent by women collecting traditional biomass, reducing their educational opportunities
(C) A severe decline in agricultural output due to electric shock hazards
(D) Improved indoor air quality and enhanced opportunities for evening education and local micro-enterprises

123. How is "energy poverty" primarily defined in the context of developing nations like India?
(A) A geographical lack of proven domestic coal and natural gas reserves
(B) The financial bankruptcy of state-owned electrical distribution companies
(C) Lack of access to affordable, reliable electricity and clean cooking facilities
(D) The voluntary refusal of a community to use electricity for religious reasons

124. To promote fuel efficiency and reduce vehicular emissions, India leapfrogged directly to which emission standard in 2020, bypassing the intermediate stage?
(A) BS-IV to BS-V
(B) BS-IV to BS-VI
(C) BS-III to BS-V
(D) BS-V to BS-VII

NODIA

125. Arrange the following events related to the coal sector in India in correct chronological order:
I. Establishment of Coal India Limited (CIL)
II. Nationalization of non-coking coal mines
III. Nationalization of coking coal mines
IV. Launch of commercial coal mining for private entities
(A) III, II, I, IV
(B) II, III, I, IV
(C) I, III, II, IV
(D) III, I, II, IV

126. What is considered the most practical and cost-effective solution for overcoming energy access challenges in highly remote and hilly areas of India?
(A) Establishing decentralized off-grid renewable systems like solar micro-grids
(B) Extending the central high-voltage transmission grid regardless of total cost
(C) Constructing large-scale nuclear power plants in every remote hilly district
(D) Supplying continuous, subsidized diesel fuel for local industrial generators

127. What is the name of the annual mass awareness campaign organized by the Petroleum Conservation Research Association (PCRA) to promote fuel conservation?
(A) Ujjwala
(B) Saksham
(C) Ujala
(D) Sankalp

128. Which of the following pairs correctly matches a Coal India Limited (CIL) subsidiary with its operational headquarters located in Madhya Pradesh?
(A) South Eastern Coalfields Limited (SECL) - Bhopal
(B) Western Coalfields Limited (WCL) - Jabalpur
(C) Central Coalfields Limited (CCL) - Indore
(D) Northern Coalfields Limited (NCL) - Singrauli

129. Coal India Limited (CIL), which plays a pivotal role in domestic coal production, holds which of the following public sector enterprise statuses?
(A) Miniratna Category-I
(B) Navratna
(C) Maharatna
(D) Statutory Corporation

130. Identify the correct option after considering the following statements about fuel efficiency initiatives in India:
Statement I: The PCRA promotes good driving habits, such as switching off the engine at traffic signals, to conserve fuel.
Statement II: Corporate Average Fuel Economy (CAFE) norms mandate automobile manufacturers to improve the average fuel efficiency of their fleets.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

Downloaded from www.pdf.tube

ANSWERS

1. (D) Peat represents the final stage of coal formation and possesses the highest heating value.
Coal formation occurs in stages, beginning with peat, which is the initial phase consisting of partially decomposed organic matter. It possesses high moisture and low carbon content. Anthracite, however, represents the final stage of coalification, featuring the highest carbon concentration and heating value. Bituminous coal remains the most commercially prevalent variety utilized across various industrial sectors in India.

2. (C) The Naharkatiya oil field is located in the offshore region of Gujarat
India possesses several significant oil fields distributed across various geological basins. The Naharkatiya field is a major onshore oil-producing area located in the Dibrugarh district of Assam, rather than Gujarat. Conversely, Mumbai High is a prominent offshore field in the Arabian Sea, while the Aishwarya field is situated in Rajasthan. Digboi remains the oldest operational well in the country.

3. (C) Solar, wind, and tidal energy are classified as commercial non-conventional resources.
Energy resources are generally categorized into conventional and non-conventional types. Conventional sources like coal and petroleum have been traditional mainstays, whereas non-conventional sources include renewable options like solar, wind, and tidal energy. While firewood and dung are non-commercial conventional fuels, electricity generated from large-scale renewable projects is increasingly integrated into the commercial energy market to ensure sustainability.

4. (B) Panipat, Mathura, Bina, Kochi
The geographical distribution of major oil refineries in India spans from the northern plains to the southern coast. Panipat is located in Haryana, representing the northernmost point among these options. Moving southward, Mathura is situated in Uttar Pradesh, followed by the Bina refinery in Madhya Pradesh. Kochi, located in Kerala, represents the southernmost refinery in this specific sequence.

5. (B) Vindhyachal Super Thermal Power Station
The Vindhyachal Super Thermal Power Station, located in the Singrauli district of Madhya Pradesh, is the largest thermal power plant in India by installed capacity. Operated by the National Thermal Power Corporation, it plays a critical role in the national power grid. While Satpura and Shree Singaji are also major plants in the state, Vindhyachal remains the most significant.

6. (B) The Sohagpur coalfield in Madhya Pradesh has significant commercial CBM reserves.
Coal Bed Methane is a form of natural gas extracted from coal seams. In Madhya Pradesh, the Gondwana rock formations host substantial coal reserves that contain methane. The Sohagpur coalfield is particularly notable for its proven commercial potential for extraction. This resource provides an alternative energy source, contributing to the state's energy mix while reducing greenhouse gas emissions during mining.

7. (B) Naturally replenished resources characterized by a lower environmental impact
Non-conventional energy resources are defined by their ability to replenish naturally over short periods, making them sustainable alternatives to fossil fuels. These include solar, wind, tidal, and geothermal energy. Unlike conventional resources such as coal and petroleum, which are finite and highly polluting, non-conventional sources generally produce fewer greenhouse gas emissions and have a significantly smaller overall environmental footprint.

8. (B) The largest share of domestic crude oil production comes from offshore fields.
India's domestic petroleum production is heavily reliant on offshore assets, with Mumbai High being the most significant contributor. While onshore fields in Rajasthan, Assam, and Gujarat

NODIA

change and reduce the long-term impact on the ecosystem.

27. (A) Vijaipur
The HVJ pipeline, standing for Hazira-Vijaipur-Jagdishpur, is a vital natural gas distribution network in India. It originates in Hazira, Gujarat, and travels through Vijaipur in the Guna district of Madhya Pradesh before reaching Jagdishpur in Uttar Pradesh. This pipeline is essential for supplying gas to fertilizer plants, power stations, and industrial units across several northern and central Indian states.

28. (A) I and III only
Jharkhand possesses the largest proven coal reserves in India, primarily within the Damodar Valley. In Madhya Pradesh, the Sohagpur coalfield is the largest by area and reserves. While Madhya Pradesh is a major producer, it generally ranks behind states like Chhattisgarh and Odisha in total annual output. Therefore, the statements regarding reserves in Jharkhand and the Sohagpur coalfield are geographically accurate.

29. (C) The high dependence on imported crude oil makes coastal locations logistically advantageous
India imports over eighty percent of its crude oil requirements, which arrive via massive tankers at various ports. Locating refineries in coastal regions minimizes the cost and complexity of transporting bulky raw crude inland. Refined products, being easier to transport via pipelines or rail, can then be distributed from these coastal hubs to various consumption centers across the entire country.

30. (D) Kudankulam UMPP
Ultra Mega Power Projects are large-scale coal-based thermal power plants with a capacity of approximately four thousand megawatts. Projects like Sasan in Madhya Pradesh and Mundra in Gujarat were awarded under this initiative to bridge the power deficit. Kudankulam, however, is a major nuclear power station located in Tamil Nadu, built with international cooperation, and does not fall under the UMPP category.

31. (C) Thorium is found abundantly in the monazite sands along the Kerala coast.
India possesses some of the world's largest reserves of thorium, which is a key component of its long-term three-stage nuclear power programme. Thorium is found in the form of monazite sands, which are heavily concentrated along the coastal stretches of Kerala, Odisha, and Tamil Nadu. Unlike uranium, which is relatively scarce domestically, thorium offers a sustainable path for future nuclear energy.

32. (B) Carbon sequestration completely eliminates the creation of carbon dioxide during coal combustion.
Thermal power plants utilize various technologies to reduce pollutants. Electrostatic precipitators capture ash, while flue-gas desulfurization and selective catalytic reduction manage sulphur and nitrogen oxides respectively. Carbon sequestration involves capturing and storing carbon dioxide after it is produced, rather than preventing its creation. It reduces the amount of gas released into the atmosphere but does not stop the chemical formation process.

33. (B) They cause minimal submergence of land and displacement of populations
Run-of-the-river hydroelectric projects utilize the natural flow and elevation of a river to generate electricity without the need for massive reservoirs. This approach significantly reduces the environmental impact by preventing the large-scale submergence of forests and agricultural land. Consequently, these projects avoid the massive displacement of local communities and preserve the terrestrial ecosystem more effectively than traditional large dam projects.

34. (D) P-2, Q-4, R-3, S-1
India's solar sector features diverse projects with unique characteristics. The Bhadla Solar Park in Rajasthan is recognized as the largest in the country. The PM KUSUM scheme focuses on the solarization of agricultural pumps. The Rewa Ultra Mega Solar project in Madhya Pradesh provides power to the Delhi Metro. The Omkareshwar project is notable for its innovative floating solar capacity.

Click Here to Buy book on Amazon

oil. The Mathura refinery is an inland facility located in Uttar Pradesh, connected via pipelines to receive crude, primarily serving the demand of northern India.

18. (A) Singrauli
Singrauli is a prominent coal-producing region in Madhya Pradesh and is widely recognized for its geological significance. It hosts the Jhingurda coal seam, which is celebrated as the thickest coal seam in India. This vast resource fuels several major thermal power plants in the vicinity, earning the region the reputation of being the energy capital of the entire country.

19. (D) I, II and IV only
India's oil and gas landscape includes diverse fields across the country. The Barmer-Sanchor basin in Rajasthan is home to the Mangala field, while Mumbai High utilizes the Sagar Samrat platform for offshore drilling. Aliabet is situated in the Gulf of Khambhat. However, Moran-Hugrijan is located in the state of Assam, not Gujarat, making the third statement regarding its location incorrect.

20. (A) P-3, Q-4, R-1, S-2
India's major oil fields are distributed across distinct geographical regions. Digboi is located in the northeastern state of Assam and is the nation's oldest field. Ankleshwar is a significant field situated in Gujarat. Mangala is the primary oil field in the desert state of Rajasthan. Finally, Mumbai High is an extensive offshore field located in the Arabian Sea, near the Maharashtra coast.

21. (C) Brahmaputra Basin
The hydroelectric potential of a river basin is determined by its water volume and the topographical gradient. The Brahmaputra basin, characterized by high rainfall and steep Himalayan terrain, possesses the highest economically exploitable hydroelectric potential in India. While the Indus and Ganga basins also have significant capacities, the sheer volume and drop in elevation of the Brahmaputra system remain unparalleled.

22. (B) Crude Oil
India's energy consumption is heavily reliant on fossil fuels, with a significant gap between domestic production and demand. Crude oil is the most critical import, as it is essential for transportation and industrial sectors. Consequently, the purchase of crude oil from international markets accounts for the largest share of India's energy import bill, significantly impacting the nation's trade balance and economy.

23. (D) Using coal-generated steam to drive turbines that produce electrical energy
Conventional thermal power plants operate on the Rankine cycle. Coal is burned in a boiler to heat water and produce high-pressure steam. This steam is then directed onto turbine blades, causing them to rotate. The mechanical energy from the rotating turbine is transferred to a generator, which converts it into electrical energy. Finally, the steam is condensed back into water.

NODIA

24. (D) Jamnagar Refinery
The Jamnagar Refinery, owned and operated by Reliance Industries in Gujarat, is the largest oil refinery in the world by installed capacity. It features advanced technological infrastructure and handles a massive volume of crude oil processing. While public sector refineries like Panipat and Kochi are significant, they have smaller capacities compared to the massive scale of the Jamnagar refining complex.

25. (B) Krishna-Godavari Basin
The Krishna-Godavari Basin, located off the eastern coast of India, holds the country's largest proven natural gas reserves. Significant deep-water discoveries in this region have transformed India's domestic energy landscape. While the Cambay and Cauvery basins also contribute to production, the sheer scale of the reserves found in the KG basin remains the most substantial for the nation's gas requirements.

26. (D) Providing affordable, reliable energy while maintaining environmental sustainability
Energy security for a developing nation like India involves ensuring that energy remains accessible and affordable for all citizens to fuel economic growth. It also requires a reliable supply to prevent disruptions in industrial and domestic sectors. Modern energy security increasingly integrates environmental sustainability by transitioning toward cleaner resources to mitigate climate

44. (D) Tarapur
The Tarapur Atomic Power Station, located in Maharashtra, was the first commercial nuclear power plant established in India. It commenced operations in 1969 with technical assistance from the United States. The plant utilized Boiling Water Reactors initially. This milestone marked the beginning of India's journey into nuclear energy generation, aiming to provide a stable baseload power source to supplement conventional thermal energy.

45. (C) 750 MW
The Rewa Ultra Mega Solar project, located in the Rewa district of Madhya Pradesh, is one of the largest single-site solar plants in the world. It has a total installed capacity of seven hundred and fifty megawatts, comprising three units of two hundred and fifty megawatts each. This project is notable for being the first solar project in India to supply power to an institutional customer.

46. (B) Madhya Pradesh
The Sardar Sarovar Project on the Narmada River is a collaborative venture between several states. According to the established power-sharing agreement, Madhya Pradesh receives the largest share, amounting to fifty-seven percent of the total electricity generated. Maharashtra receives twenty-seven percent, while Gujarat receives sixteen percent. This project is a vital source of renewable hydroelectric power for the participating states in the region.

47. (B) To provide farmers with solar pumps and grid-connected renewable power plants
The PM KUSUM scheme is designed to de-dieselize the agricultural sector and enhance the financial security of farmers. It provides subsidies for installing solar-powered irrigation pumps and encourages the setting up of small solar power plants on fallow or barren land. By connecting these plants to the grid, farmers can earn additional income by selling surplus power, promoting decentralized renewable energy.

48. (B) Chutka, Mandla district
The proposed nuclear power plant in Madhya Pradesh is located at Chutka in the Mandla district. This project is planned to utilize Pressurized Heavy Water Reactors to generate electricity. It represents a significant expansion of the state's energy infrastructure, aiming to provide a reliable baseload of carbon-free power to meet the growing industrial and domestic electricity demands of the region.

49. (A) Both A and R are true and R is the correct explanation of A.
Fly ash is a fine residue from coal combustion that possesses pozzolanic properties. When mixed with water and calcium hydroxide, it reacts to form compounds with cementitious qualities. This makes it an excellent supplementary material for manufacturing Portland cement, improving the durability and strength of the final product. Using fly ash also provides an environmentally friendly way to manage industrial waste.

50. (A) II, IV, I, III
The geographical distribution of nuclear power plants in India follows a north-to-south trajectory. Narora is situated in Uttar Pradesh, marking the northernmost location. Moving south, Kakrapar is located in Gujarat. Further south, the Kaiga Generating Station is situated in Karnataka. Finally, the Kudankulam Nuclear Power Plant in Tamil Nadu represents the southernmost facility among the listed reactors in the country.

51. (D) Bhadla Solar Park
The Bhadla Solar Park, located in the Jodhpur district of Rajasthan, is currently the largest solar park in the world by capacity. It spans a vast area of arid land and benefits from exceptionally high solar insolation. With a total capacity exceeding two thousand megawatts, it plays a pivotal role in India's renewable energy targets and showcases the nation's commitment to large-scale solar.

52. (D) Andhra Pradesh
The Tummalapalle mine, located in the Kadapa district of Andhra Pradesh, is recognized for possessing one of the world's largest uranium reserves. This discovery is crucial for India's nuclear energy security, as it provides a significant domestic source of fuel for its reactors. The extraction and processing of uranium from this site support the nation's long-term goal of increasing its nuclear power capacity.

Downloaded from www.pdf.tube

35. (A) It is fertile rather than fissile and cannot sustain a chain reaction alone
Thorium-232 is considered a fertile material, meaning it cannot undergo nuclear fission by itself to sustain a chain reaction. It must first capture a neutron to be converted into Uranium-233, which is fissile. Therefore, India's nuclear programme uses natural uranium in the first stage to produce plutonium, which then facilitates the conversion and utilization of thorium in subsequent stages.

36. (A) Omkareshwar Dam
The Omkareshwar Dam, situated on the Narmada River in Madhya Pradesh, is the site for a massive floating solar power plant. This innovative project utilizes the water surface of the reservoir to install solar panels, which helps in land conservation and reduces water evaporation. It represents a significant step toward integrating renewable energy sources while optimizing the use of existing water infrastructure.

37. (A) Nathpa Jhakri - Uttarakhand
Nathpa Jhakri is one of India's largest hydroelectric power stations, but it is located on the Satluj River in the state of Himachal Pradesh, not Uttarakhand. Other major stations like Srisailam in Andhra Pradesh, Koyna in Maharashtra, and Idukki in Kerala are correctly identified with their respective states. These plants are vital for providing peak power and stabilizing the regional grids.

38. (D) Deuterium Oxide
Heavy water plants in India produce deuterium oxide, which is essential for the operation of Pressurized Heavy Water Reactors. In these reactors, heavy water serves as both a moderator to slow down neutrons and a coolant to transfer heat from the reactor core. This technology allows the use of natural uranium as fuel, which is a cornerstone of the first stage.

39. (D) India experiences over 300 clear sunny days a year across most of its territory.
India's tropical and subtropical location grants it immense solar energy potential. Most regions of the country receive high solar radiation, experiencing over three hundred clear, sunny days annually. This consistent availability of sunlight makes solar power a highly viable and sustainable energy source. While insolation varies slightly between the desert regions and high-rainfall areas, the overall national potential remains exceptionally high.

40. (D) Statement I is false but Statement II is true
Current nuclear power reactors in India and globally generate electricity through nuclear fission, which involves splitting heavy atoms like uranium, rather than nuclear fusion. In conventional light water reactors, Uranium-235 is the specific fissile isotope that sustains the chain reaction. While research into fusion continues, it is not yet a commercial method for power generation in the national grid.

41. (B) III only
Wind energy generation is a clean process that converts the kinetic energy of moving air into mechanical power through turbines. High potential areas are found along coastlines and specific inland corridors. However, wind turbines do not require heavy rainfall to function; in fact, they are most efficient in regions with consistent wind speeds, regardless of precipitation, making the statement about rainfall requirements incorrect.

42. (C) P-4, Q-3, R-2, S-1
India's major hydroelectric projects are strategically located on prominent rivers. The Bhakra Nangal project is situated on the Sutlej River. The Tehri Dam, the highest in India, is built across the Bhagirathi River. The Salal project is located on the Chenab River in Jammu and Kashmir. The Ban Sagar Dam is a multipurpose project constructed on the Son River in Madhya Pradesh.

43. (B) Sulphur dioxide
Conventional coal-fired thermal power plants emit several gases during combustion. Sulphur dioxide is a major pollutant released when coal containing sulphur is burned. Once in the atmosphere, it reacts with water vapor and oxygen to form sulphuric acid, which eventually falls as acid rain. This phenomenon can cause significant damage to forests, aquatic ecosystems, and historical monuments, necessitating the use of desulfurization technologies.

NODIA

also provide substantial quantities, offshore extraction remains the dominant source. Most petroleum reserves are found in sedimentary basins. Despite this domestic production, India still imports a vast majority of its crude oil requirements.

9. (B) Oman Oil Company
The Bina Oil Refinery, located in the Sagar district of Madhya Pradesh, was established as a prestigious joint venture project. The collaboration involves Bharat Petroleum Corporation Limited and the Oman Oil Company. This refinery is strategically significant for meeting the petroleum product demands of central and northern India, showcasing a successful international partnership in the nation's vital energy infrastructure sector.

10. (C) Statement I is true but Statement II is false
Gondwana coal fields are of immense importance to India, accounting for approximately ninety-eight percent of the total coal reserves and nearly all metallurgical coal. These are primarily located in the peninsular river valleys. In contrast, Tertiary coal fields are younger and found mainly in the northeastern states and coastal regions like Tamil Nadu, rather than the peninsular plateau.

11. (D) I, II, III and IV only
Hydroelectric power is a crucial renewable resource that enhances grid stability through pumped storage projects, which function like large-scale batteries. In India, small hydro projects are specifically defined by a capacity of up to twenty-five megawatts. Run-of-the-river designs are environmentally efficient as they avoid large reservoirs. However, India has currently utilized less than half of its total potential.

12. (C) Scaling up renewable installations and diversifying the mix through efficiency measures
Enhancing energy security requires a multi-faceted approach focused on reducing dependence on volatile fossil fuel imports. By scaling up solar, wind, and other renewable installations, India can create a more resilient energy infrastructure. Diversifying the energy mix and implementing stringent efficiency measures further ensure that the growing national demand is met sustainably without compromising long-term environmental and economic stability.

13. (A) Both Statement I and Statement II are correct
India faces a dual reality in the petroleum sector. It is heavily dependent on imports to meet over eighty percent of its crude oil requirements for refineries. Simultaneously, India has developed a robust refining infrastructure, possessing the capacity to process crude into various products. Consequently, the nation has emerged as a significant net exporter of refined petroleum products to global markets.

14. (C) The combustion of high-ash content pulverized coal
Fly ash is a byproduct generated during the combustion of coal in thermal power plants. Indian coal is characterized by a high ash content, often ranging between thirty-five and forty-five percent. When this coal is pulverized and burned to generate steam for electricity, the fine particles are carried away with flue gases. These particles are then captured by electrostatic precipitators.

15. (D) Petroleum and Natural Gas Regulatory Board (PNGRB)
The Petroleum and Natural Gas Regulatory Board serves as the statutory body responsible for overseeing the midstream and downstream segments of the oil and gas industry. Its mandate includes regulating the refining, processing, storage, transportation, and distribution of natural gas and petroleum products. This ensures a competitive market environment while protecting the interests of consumers and entities engaged in these sectors.

16. (A) Wind Energy
Energy sources are classified as conventional or non-conventional based on their usage history and replenishment rate. Coal, petroleum, and natural gas are conventional fossil fuels that are non-renewable and finite. In contrast, wind energy is a non-conventional, renewable resource that is naturally replenished. It is considered a clean energy source due to its minimal environmental impact compared to fossil fuels.

17. (A) Mathura Refinery
Oil refineries are categorized as either coastal or inland based on their geographic location. Coastal refineries, such as those in Mangalore, Paradip, and Haldia, are situated near ports to facilitate the direct unloading of imported crude

Click Here to Buy book on Amazon

53. (C) To breed fissile Plutonium-239 while converting Thorium into Uranium-233
The second stage of India's nuclear programme centers on Fast Breeder Reactors. These reactors are designed to produce more fissile material than they consume. They utilize plutonium-239 as fuel and feature a blanket of thorium-232. During operation, the thorium is converted into Uranium-233, a fissile isotope. This stage is critical for bridging the gap between natural uranium usage and the final thorium-based energy cycle.

54. (C) Statement I is true but Statement II is false
Solar photovoltaic cells utilize the photoelectric effect to convert sunlight directly into direct current electricity. However, most electrical grids and household appliances operate on alternating current. Therefore, inverters are essential components in grid-connected systems, as they convert the direct current produced by the panels into alternating current. Without inverters, the electricity generated by solar panels could not be effectively integrated.

55. (A) It reduces the dissolved oxygen in the water, harming aquatic life.
Thermal pollution occurs when power plants discharge heated water into natural ecosystems. As water temperature increases, its capacity to hold dissolved oxygen decreases significantly. This reduction in oxygen creates a stressful environment for fish and other aquatic organisms, potentially leading to increased mortality and altered breeding patterns. Furthermore, the sudden temperature shift can disrupt the delicate balance of the local aquatic food chain.

56. (A) Tehri Dam
The Tehri Dam, located on the Bhagirathi River in Uttarakhand, is the highest dam in India. It is a multi-purpose rock and earth-fill embankment dam that supports a major hydroelectric power complex. The project includes both a conventional hydroelectric plant and a pumped-storage system, providing significant peak power to the northern grid while also serving irrigation and municipal water needs.

57. (A) It is a major component of India's National Action Plan on Climate Change (NAPCC).
The National Solar Mission was launched as one of the eight key missions under the National Action Plan on Climate Change. Its primary goal is to establish India as a global leader in solar energy by creating favorable policy conditions for its diffusion across the country. The mission has seen its targets significantly increased over time to align with India's growing renewable energy ambitions.

58. (A) I and II only
India's nuclear programme is structured into three distinct stages to maximize limited domestic uranium while utilizing abundant thorium reserves. The first stage uses natural uranium in heavy water reactors. The second stage employs fast breeder reactors to produce plutonium and convert thorium. The third stage is specifically designed to use Uranium-233 derived from thorium, rather than relying on imported uranium, ensuring long-term energy independence.

59. (C) Western Rajasthan and Gujarat
Solar insolation is highest in regions with frequent clear skies and low humidity. Western Rajasthan and parts of Gujarat receive the highest average daily solar radiation in India due to their arid climate and minimal cloud cover. These geographical advantages have made these states hubs for large-scale solar parks, significantly contributing to the national renewable energy capacity and providing ideal conditions for solar technology.

60. (B) Russia
The Kudankulam Nuclear Power Plant, located in Tamil Nadu, is the highest-capacity nuclear station in India. It was developed through a significant international partnership between India and Russia. The plant utilizes advanced VVER-1000 pressurized water reactors. This collaboration includes technical expertise, equipment supply, and fuel provision, representing a cornerstone of the long-standing strategic and energy cooperation between the two nations.

Downloaded from www.pdf.tube

78. (D) Marine locations offer stronger, more consistent, and less turbulent wind streams
Offshore wind projects generally have higher electricity generation potential than onshore ones because the sea surface is much smoother than land. On land, trees, buildings, and hills create friction and turbulence that slow down the wind. In contrast, marine environments allow wind to flow unimpeded, resulting in higher average speeds and more consistent flow, which allows turbines to operate at higher capacity factors.

79. (B) I, II, IV and V only
Tidal energy is a predictable renewable resource driven by the gravitational pull of the moon and sun. In India, the Gulf of Khambhat and the Gulf of Kutch are prime locations for potential extraction. The Sundarbans region also offers viable conditions. Crucially, tidal patterns are determined by celestial mechanics and remain completely unaffected by weather changes or the day-night cycle, providing a highly reliable power source.

80. (D) P-3, Q-1, R-2, S-4
Biomass energy sources are closely linked to specific economic activities. Rice husk is a byproduct of the agricultural sector, particularly during paddy milling. Bagasse is the fibrous residue generated by the sugar industry after juice extraction. Municipal solid waste is managed by urban local bodies for energy recovery. Forest residues, such as twigs and bark, are associated with silviculture and timber logging activities.

81. (C) Statement I is true but Statement II is false
Geothermal energy is derived from the constant heat produced within the Earth's core. Unlike solar and wind energy, which are intermittent and depend on weather conditions, geothermal energy provides a steady and continuous supply of heat. Consequently, geothermal power plants can operate as baseload facilities, producing electricity twenty-four hours a day, regardless of whether it is day or night, or if the wind is blowing.

82. (A) Assam
The potential for wind energy in India is primarily concentrated in the western and southern states. Gujarat, Karnataka, and Maharashtra possess extensive coastlines or favorable upland terrains that provide the high, consistent wind speeds necessary for commercial power generation. Assam, located in the northeastern region, lacks these specific geographic features, resulting in much lower wind energy potential compared to the leading states.

83. (A) Micro Hydel - up to 100 kW
Small hydropower projects are categorized based on their installed capacity. Micro hydel projects are the smallest, with a capacity of up to one hundred kilowatts. Mini hydel projects typically range from one hundred kilowatts up to two megawatts. Small hydel projects encompass those with capacities between two and twenty-five megawatts. These classifications help in applying appropriate regulatory and subsidy frameworks for decentralized renewable energy.

NODIA

84. (C) The Ministry of New and Renewable Energy has classified tidal, wave, and OTEC as renewable energy sources.
Marine energy technologies, including tidal, wave, and ocean thermal energy conversion, are officially recognized as renewable energy sources by the Indian government. While these technologies are currently in various stages of experimental or pilot development, they hold significant long-term potential for the country. The classification allows these projects to benefit from the same policy incentives and support mechanisms as solar and wind energy.

85. (C) Methane
Biogas is a versatile renewable fuel produced through the anaerobic digestion of organic materials like animal dung and food waste. Its primary combustible component is methane, which typically accounts for fifty-five to seventy percent of the total volume. The remaining gas is mostly carbon dioxide, with trace amounts of other gases. Methane provides the energy content that makes biogas suitable for cooking, heating, and electricity.

86. (B) Dewas
The Jamgodrani Hills are a prominent site for wind energy in Madhya Pradesh, featuring a large number of wind turbines that contribute significantly to the state's renewable energy capacity. These hills are located in the Dewas district. The region's topography creates

drive turbines. For a tidal power plant to be economically and technically viable, a significant head of water is required. Generally, a minimum tidal range of approximately five to seven meters is necessary to produce enough energy to justify the high capital costs associated with building the required barrages or lagoons.

70. (C) 100%
To accelerate the transition to clean energy and attract global expertise, the Indian government allows one hundred percent Foreign Direct Investment under the automatic route for renewable energy projects. This includes offshore wind, solar, and biomass energy. This policy encourages international companies to invest in India's energy infrastructure, bringing in the necessary capital and advanced technology required to achieve the nation's ambitious renewable energy targets.

71. (A) A heat source, a permeable aquifer, and a cap rock
A commercial hydrothermal system for geothermal energy requires three essential geological components. First, a heat source, such as magma or radioactive decay, must exist at depth. Second, a permeable aquifer is needed to allow water to circulate and absorb the heat. Finally, an impermeable cap rock must be present to trap the hot fluid or steam under pressure, allowing it to be extracted through wells.

72. (C) Statement I is true but Statement II is false
The Palghat Gap is a major low-mountain pass in the Western Ghats between Tamil Nadu and Kerala. It acts as a natural funnel for the southwest monsoon winds, creating a prominent inland wind corridor. Because of the narrowing topography, wind speeds in the gap are consistently much higher than in the surrounding areas, making it a highly productive region for wind energy generation.

73. (D) To convert cattle dung and agricultural waste into biogas and organic manure
The GOBARdhan scheme is a key initiative focused on managing organic waste in rural areas. Its primary objective is to convert cattle dung, kitchen waste, and agricultural residues into biogas and bio-slurry. This process provides villages with a clean source of cooking fuel and lighting while simultaneously producing high-quality organic manure. The scheme promotes circular economy principles, improves rural sanitation, and increases farmer income.

74. (C) Gasification
Gasification is a thermochemical process that converts solid biomass into a combustible gas mixture known as producer gas or syngas. This occurs by reacting the material at high temperatures with a controlled amount of oxygen or steam. The resulting gas, primarily composed of hydrogen and carbon monoxide, can be burned in internal combustion engines or turbines to generate electricity or used as a chemical feedstock.

75. (D) Ladakh
Puga Valley, situated in the high-altitude Ladakh region, is considered one of the most promising sites for geothermal energy in India. The valley exhibits numerous hot springs and geothermal manifestations. Due to its unique geological setting, the heat is accessible at relatively shallow depths. Developing this resource would provide a clean, reliable, and localized source of power for the remote communities in this cold desert.

76. (D) The National Institute of Wind Energy (NIWE) is headquartered in New Delhi.
India has a robust wind energy sector, consistently ranking among the top global producers. Tamil Nadu has long been a leader in this field, although Gujarat has recently surpassed it in total capacity. The National Institute of Wind Energy serves as the technical focal point for the sector. However, it is headquartered in Chennai, Tamil Nadu, which is the heart of India's wind energy industry.

77. (C) 20°C
Ocean Thermal Energy Conversion technology utilizes the temperature difference between warm surface waters and cold water found at depths of nearly one kilometer. For an OTEC system to operate efficiently and produce net positive power, a minimum temperature gradient of approximately twenty degrees Celsius is required. This specific condition is typically found in tropical and subtropical oceanic regions, where surface waters remain warm throughout the year.

Click Here to Buy book on Amazon

112. (B) It mandates energy standards for new commercial buildings of 100 kW or more
The Energy Conservation Building Code was developed to set minimum energy efficiency standards for large commercial buildings. It applies to new structures with a connected load of one hundred kilowatts or more. By mandating efficient designs for lighting, ventilation, and air conditioning, the code aims to significantly reduce the energy intensity of India's rapidly growing urban infrastructure, leading to long-term energy and cost savings.

113. (C) The scheme completely relies on imported LED bulbs, strictly banning domestic manufacturing.
The UJALA scheme has been instrumental in making energy-efficient lighting accessible across India. Rather than relying on imports, the scheme actively encouraged and stimulated domestic manufacturing of LED bulbs. By creating a massive and predictable demand, it helped local industries achieve economies of scale, leading to a dramatic reduction in the retail price of LEDs and making India a major producer of efficient lighting.

114. (B) PM KUSUM - Subsidizing domestic diesel generators for agriculture
India has launched various initiatives to drive its energy transition. The FAME scheme promotes electric vehicles, while the National Green Hydrogen Mission targets industrial decarbonization. UJALA focuses on efficient lighting. However, the PM KUSUM scheme is designed specifically to replace expensive and polluting diesel pumps with solar-powered irrigation systems, providing farmers with a clean energy source rather than subsidizing the use of traditional diesel generators.

115. (D) Its primary objective is to scale up solar energy applications and reduce the cost of solar technology.
The International Solar Alliance was established as a collaborative platform to harmonize and aggregate demand for solar energy across its member nations. Its primary mission is to facilitate the massive deployment of solar technology and mobilize over one trillion dollars in investment. By fostering research, sharing best practices, and promoting innovation, the alliance aims to make solar energy affordable and accessible to all, especially in developing countries.

116. (D) Energy Conservation Act, 2001
The Bureau of Energy Efficiency is a statutory body created under the provisions of the Energy Conservation Act, 2001. Its primary mission is to develop policies and strategies with a focus on self-regulation and market principles to reduce the energy intensity of the Indian economy. The bureau coordinates with various stakeholders to implement programs like star labeling, energy audits, and efficiency standards across different sectors.

117. (D) Pumped Storage Hydropower
Pumped storage hydropower is currently the most mature and widely deployed technology for large-scale energy storage in India. It involves using surplus electricity during low-demand periods to pump water from a lower reservoir to an upper one. When demand peaks, the stored water is released back down to drive turbines and generate electricity. This provides the grid with essential stability and helps manage the intermittency of solar and wind.

NODIA

118. (A) Both A and R are true and R is the correct explanation of A.
The UJALA scheme has significantly impacted India's electricity demand by replacing millions of inefficient bulbs with LED technology. LEDs consume much less power to provide the same brightness, leading to a substantial reduction in overall household electricity consumption. Because residential lighting is a major contributor to electricity usage during evening hours, this widespread adoption has effectively lowered the peak load on the national power grid.

119. (A) Renewable energy (with large hydro) accounts for over 40% of installed capacity
India has made remarkable progress in diversifying its energy sources. Currently, the combined installed capacity from non-fossil fuel sources, including solar, wind, biomass, and large hydroelectric projects, has surpassed the forty percent mark of the total national capacity. This achievement reflects the country's successful policy push toward cleaner energy, although coal still remains the single largest individual fuel

favorable wind conditions, making it one of the early and most successful centers for wind power development in central India.

87. (B) Vizhinjam, Kerala
India's first experimental project to harness energy from ocean waves was established in 1991 at Vizhinjam, near Thiruvananthapuram in Kerala. The project utilized an oscillating water column technology to convert the motion of waves into electricity. This pilot initiative provided valuable data and insights into the technical challenges and potential of wave energy along India's extensive coastline, marking an early step in marine energy research.

88. (C) 25 MW
In the Indian regulatory framework, hydroelectric projects are divided into two main categories based on their size. Projects with an installed capacity of up to twenty-five megawatts are classified as "Small Hydropower" and fall under the purview of the Ministry of New and Renewable Energy. Larger projects are managed by the Ministry of Power. This distinction allows smaller, environmentally friendly projects to receive specific incentives.

89. (B) Gulf of Khambhat
The Gulf of Khambhat in Gujarat possesses the highest theoretical potential for tidal energy generation in India due to its unique funnel-shaped geography, which significantly amplifies the tidal range. Estimates suggest that this region could support several gigawatts of power. While the Gulf of Kutch and the Sundarbans also have potential, the massive tidal volume and height in Khambhat make it the most promising site.

90. (A) Sugarcane
Bagasse is the dry, fibrous material that remains after sugarcane stalks are crushed to extract their juice. It is a major source of biomass energy in India, particularly within the sugar industry. Most sugar mills utilize bagasse in co-generation plants to produce steam and electricity for their own operations, often exporting surplus power to the national grid, making it an efficient renewable resource.

91. (A) Both Statement I and Statement II are true
The Perform, Achieve and Trade scheme is a market-based mechanism designed to enhance energy efficiency in large, energy-intensive industries. Under this scheme, the government sets specific energy reduction targets for these entities. If an industry exceeds its target, it is awarded Energy Saving Certificates. These certificates can then be traded with other industries that have failed to meet their own energy-saving goals.

92. (B) 2015
The International Solar Alliance was launched in 2015 by India and France during the United Nations Climate Change Conference in Paris. The alliance was formed to provide a platform for cooperation among solar-rich countries to scale up the use of solar energy and reduce technology costs. Since its launch, it has expanded its membership globally, becoming a key international organization headquartered in India.

93. (C) Oxygen
A hydrogen fuel cell produces electricity through an electrochemical reaction between hydrogen and oxygen. In the cell, hydrogen is split into protons and electrons. The electrons flow through an external circuit to create electricity, while the protons pass through a membrane to combine with oxygen. The final result of this process is the production of pure water and heat, making it a zero-emission technology.

94. (C) P-4, Q-2, R-1, S-3
Grid and storage technologies are essential for modernizing energy systems. Pumped storage hydropower uses water to store energy mechanically. Lithium-ion batteries provide electrochemical storage. Smart meters enable two-way communication between utilities and consumers to optimize usage. Net metering is a specific billing mechanism that allows residential or commercial rooftop solar owners to receive credit for the surplus electricity they feed back into the grid.

95. (B) 500 MW
India has set an ambitious target to reach five hundred gigawatts of non-fossil fuel installed electricity capacity by the year 2030. This

Downloaded from www.pdf.tube

reduce petroleum consumption and protect the environment while saving money for consumers.

128. (D) Northern Coalfields Limited (NCL) - Singrauli
Coal India Limited operates through several subsidiary companies across different regions. Northern Coalfields Limited is a major subsidiary responsible for coal production in the Singrauli region. Its operational headquarters is located in Singrauli, Madhya Pradesh. This company plays a vital role in supplying coal to several massive power plants in central India, utilizing advanced mechanized open-cast mining techniques to meet the nation's energy demands.

129. (C) Maharatna
Coal India Limited is one of the world's largest coal-producing companies and holds the prestigious Maharatna status among Indian public sector enterprises. This status is granted to large companies with significant turnover, net worth, and a consistent track record of high profitability. It provides the company with greater financial and operational autonomy, allowing it to make large-scale investments and expand its operations to ensure national energy security.

130. (A) Both Statement I and Statement II are true
Improving fuel efficiency in India involves both behavioral changes and regulatory standards. The Petroleum Conservation Research Association promotes simple but effective habits, such as turning off engines at signals, to reduce fuel wastage. Simultaneously, the government enforces Corporate Average Fuel Economy norms. These regulations require automobile manufacturers to ensure that the average fuel efficiency of their entire fleet meets specific targets, driving technological innovation.

NODIA

ensure a more stable and continuous renewable energy supply.

104. (D) Phasing out all coal power plants completely by 2025
India's Panchamrit strategy announced at COP26 includes five ambitious climate goals. These involve reaching five hundred gigawatts of non-fossil energy capacity, meeting fifty percent of energy requirements from renewables, and reducing carbon emissions by one billion tonnes by 2030. It also aims for a forty-five percent reduction in carbon intensity and achieving net-zero emissions by 2070. Immediate phasing out of all coal is not included.

105. (C) To achieve universal household electrification in the country
The Saubhagya scheme was launched with the mission to provide "last-mile" connectivity and electricity connections to all un-electrified households in both rural and urban areas. By providing free connections to poor households and subsidized ones to others, the scheme aimed to ensure that every home in India has access to reliable electricity, thereby fostering social inclusion and improving overall quality of life.

106. (B) 5 Million Metric Tonnes (MMT) per annum
The National Green Hydrogen Mission has set a target for India to become a global hub for the production and export of green hydrogen. By 2030, the mission aims to achieve a production capacity of at least five million metric tonnes per annum. This goal is supported by plans to add approximately one hundred and twenty-five gigawatts of renewable energy capacity specifically for hydrogen production.

107. (A) An electrical grid using digital technology to react to local changes in usage
A smart grid integrates advanced digital communication and automation technologies into the traditional power system. This allows the grid to monitor and react to changes in electricity demand and supply in real-time. By optimizing the flow of power, smart grids improve reliability, reduce transmission losses, and facilitate the integration of decentralized renewable energy sources, ultimately creating a more efficient and resilient national power infrastructure.

108. (A) Energy Efficiency Services Limited (EESL)
Energy Efficiency Services Limited is a joint venture of public sector undertakings under the Ministry of Power. It is the lead agency responsible for implementing large-scale energy efficiency projects like the UJALA scheme. By leveraging bulk procurement, EESL has significantly lowered the cost of LED bulbs and other efficient appliances, making them affordable for millions of Indian households and driving a nationwide energy-saving movement.

109. (A) Coal > Renewable Energy > Hydro > Nuclear
India's installed power capacity remains dominated by thermal power, with coal being the primary source. However, renewable energy sources like solar and wind have seen massive growth and now hold the second-largest share. Large hydroelectric projects provide a significant third portion of the capacity. Nuclear power, while providing a stable baseload, currently accounts for the smallest percentage of the total national installed electricity capacity.

110. (C) Clean Coal Technologies
India's target of achieving five hundred gigawatts of non-fossil energy capacity by 2030 is focused strictly on resources that do not rely on carbon-based fossil fuels. This category includes solar and wind energy, large and small hydroelectric projects, and nuclear power. Clean coal technologies, while aiming to reduce the emissions from coal combustion, still utilize a fossil fuel source and are therefore excluded from the non-fossil capacity count.

111. (D) It focuses on separating agriculture and non-agriculture power feeders
The Deendayal Upadhyaya Gram Jyoti Yojana is a major rural electrification scheme with several key components. A primary focus is the separation of agriculture and non-agriculture power feeders. This allows for a more controlled and reliable supply of electricity to farmers for irrigation while ensuring that rural households receive a continuous and stable power supply for their daily domestic needs and local business activities.

Click Here to Buy book on Amazon

commitment is part of the nation's broader strategy to combat climate change and reduce carbon emissions. The goal includes a massive expansion of solar and wind power, along with contributions from nuclear and large-scale hydroelectric projects to ensure a sustainable future.

96. (B) The state achieved 100% electrification of willing un-electrified households
Under the Saubhagya scheme, Madhya Pradesh achieved a major milestone by ensuring that every willing household in the state gained access to electricity. This achievement required a massive effort to extend distribution lines to remote villages and provide individual connections. By reaching one hundred percent electrification, the state significantly improved the living standards and economic opportunities for its rural and underserved populations.

97. (D) Hydrogen produced from water electrolysis powered by renewable energy sources
Green hydrogen is distinguished by its environmentally friendly production process. It is created by using an electrolyzer to split water into hydrogen and oxygen. For the hydrogen to be classified as "green," the electricity used for this electrolysis must come exclusively from renewable sources like solar or wind power. This ensures that the entire production cycle is carbon-free, supporting global decarbonization efforts.

98. (A) Gurugram, India
The International Solar Alliance is a prominent international intergovernmental organization. It is unique as it is the first such global body to be headquartered in India. The secretariat is located in Gurugram, Haryana. From this hub, the alliance coordinates global efforts to increase solar energy deployment, mobilize investment, and facilitate technical cooperation among its member nations to achieve sustainable energy goals.

99. (B) The intermittent nature of solar and wind requiring robust energy storage
One of the primary technical challenges in transitioning to high-renewable energy is intermittency. Unlike coal or nuclear power, solar and wind generation depend on weather conditions and time of day. To maintain a stable and reliable power grid, robust energy storage solutions, such as batteries and pumped hydro, are required to store surplus energy and release it during periods of low generation or high demand.

100. (C) They convert electricity directly into light rather than wasting energy as heat
Light Emitting Diode bulbs are significantly more efficient than traditional incandescent bulbs. While incandescent bulbs produce light by heating a filament until it glows, wasting about ninety percent of energy as heat, LEDs use semiconductors to convert electricity directly into light. This process produces very little heat, consumes much less power for the same level of brightness, and results in a much longer lifespan.

101. (A) Both Statement I and Statement II are true
In India, the official definition of an electrified village includes both infrastructure and access requirements. At least ten percent of the total households in the village must have electricity. Furthermore, basic distribution infrastructure, such as transformers and lines, must be established within the inhabited locality. Finally, electricity must be provided to public places like schools, health centers, and community halls within the village.

102. (A) To inform consumers about the energy efficiency of household appliances
The Star Labeling program is a consumer-oriented initiative that assigns a star rating to various electrical appliances based on their energy efficiency. A higher number of stars indicates that the appliance consumes less electricity for the same level of performance. This helps consumers make informed choices to reduce their electricity bills and encourages manufacturers to produce more efficient products, ultimately lowering the national energy demand.

103. (B) One Sun One World One Grid (OSOWOG)
The One Sun One World One Grid initiative was launched to create a global interconnected green grid. The vision is to link different regional grids to transfer solar power across various time zones, ensuring that "the sun never sets" on the energy supply. By sharing solar resources globally, countries can reduce the need for storage and

NODIA

source for electricity generation in the current mix.

120. (A) Both Statement I and Statement II are true
India's updated climate commitments reflect a heightened ambition to reduce the environmental impact of its economic growth. The nation aims to significantly lower its emissions intensity and has set a massive target of five hundred gigawatts for non-fossil fuel capacity by 2030. This target is comprehensive, including all forms of renewable energy such as solar and wind, as well as nuclear power and large-scale hydroelectric projects.

121. (A) Ministry of Petroleum and Natural Gas
The Petroleum Conservation Research Association is a registered society established under the Ministry of Petroleum and Natural Gas. Its primary mandate is to promote energy efficiency and conservation across various sectors of the economy, including transport, industry, and agriculture. Through research, education, and awareness campaigns, it helps the nation reduce its dependence on oil imports and minimize the environmental impact of fossil fuel consumption.

122. (D) Improved indoor air quality and enhanced opportunities for evening education and local micro-enterprises
Access to clean energy in rural areas has transformative socioeconomic benefits. By replacing traditional biomass with clean cooking fuels and electricity, indoor air pollution is drastically reduced, improving public health. Furthermore, reliable lighting extends the productive hours of the day, allowing children to study in the evenings and enabling local entrepreneurs to run small businesses, ultimately driving economic growth and empowering underserved communities across the country.

123. (C) Lack of access to affordable, reliable electricity and clean cooking facilities
Energy poverty is a critical challenge defined by the inability of households to access basic energy services. This includes a lack of electricity for lighting and appliances, as well as the absence of clean, modern fuels for cooking. Addressing energy poverty is essential for improving health, education, and economic productivity, as it frees individuals from the burden of collecting traditional fuels and reduces exposure to harmful smoke.

124. (B) BS-IV to BS-VI
In a significant move to curb air pollution, the Indian government decided to skip the Bharat Stage V emission standards entirely. In April 2020, the nation leapfrogged directly from BS-IV to BS-VI for all new vehicles. This transition mandated advanced engine technologies and much cleaner fuels, significantly reducing the emissions of nitrogen oxides and particulate matter, bringing India's vehicular emission standards in line with global benchmarks.

125. (A) III, II, I, IV
The development of India's coal sector followed a clear historical progression. Coking coal mines were nationalized in 1971, followed by non-coking coal mines in 1973. Coal India Limited was then established in 1975 to consolidate and manage the sector. Much later, in 2020, the government launched commercial coal mining, allowing private entities to mine and sell coal, marking a major shift toward a more liberalized market.

NODIA

126. (A) Establishing decentralized off-grid renewable systems like solar micro-grids
In geographically challenging areas like high mountains or dense forests, extending the national central power grid is often prohibitively expensive and technically difficult. Decentralized off-grid systems, such as solar-powered micro-grids, provide a practical and cost-effective alternative. These localized systems generate and distribute power within a small community, ensuring reliable energy access for remote households without the need for massive transmission infrastructure or long-distance cabling.

127. (B) Saksham
Saksham is an annual month-long mass awareness campaign organized by the Petroleum Conservation Research Association. The initiative aims to educate citizens about the importance of fuel conservation and energy efficiency. Through various activities and workshops, it encourages sustainable habits, such as better driving techniques and the use of efficient appliances, to

61. (C) Offshore wind farms face fewer space constraints compared to onshore wind farms.
Offshore wind energy offers several advantages over onshore installations. Since these farms are located in the ocean, they avoid many of the land acquisition and space constraint issues that affect terrestrial projects. Furthermore, wind speeds over the sea are generally stronger, more consistent, and less turbulent, leading to higher electricity generation potential. While installation costs remain higher, the vast available area presents significant opportunities.

62. (C) Statement I is true but Statement II is false
Biogas is produced through a biological process known as anaerobic digestion, which occurs specifically in the absence of oxygen. During this process, microorganisms break down organic matter to produce a mixture of methane and carbon dioxide. After the gas is extracted, the remaining nutrient-rich slurry serves as an excellent organic fertilizer, helping to return essential minerals to the soil and promoting sustainable agricultural practices.

63. (B) Gujarat
Gujarat has emerged as the leading state in India in terms of cumulative installed wind power capacity. The state's extensive coastline and favorable geographical features provide high wind speeds ideal for turbine operation. While Tamil Nadu was the traditional leader for many years, consistent policy support and infrastructure development in Gujarat have allowed it to surpass other states in the total amount of wind energy generated.

64. (A) Warm water vaporizes working fluid > Vapor turns turbine > Turbine runs generator > Cold water condenses vapor
Ocean Thermal Energy Conversion in a closed-cycle system utilizes the temperature gradient between surface and deep waters. Warm surface water is used to heat and vaporize a low-boiling-point working fluid, such as ammonia. The resulting vapor expands to drive a turbine connected to a generator. Finally, cold water pumped from the ocean depths condenses the vapor back into a liquid, allowing the cycle to repeat continuously.

65. (D) Statement I is false but Statement II is true
Small hydropower projects are distinct from large-scale hydro because they do not require the construction of massive dams or large reservoirs. Instead, they often utilize the natural flow of small streams or canal drops. This lack of large infrastructure results in a much smaller environmental footprint and shorter gestation periods, making them an ideal and sustainable solution for decentralized power generation in remote areas.

66. (A) Chhattisgarh
Tattapani is a significant site for geothermal energy potential located in the Balrampur district of Chhattisgarh. The area is known for its natural hot springs, indicating the presence of geothermal heat near the earth's surface. Studies have been conducted to assess the feasibility of setting up a geothermal power plant here, which would utilize the steam or hot water to generate clean, baseload electricity.

67. (C) The area must have a minimum average wind speed of roughly 6-8 meters per second.
The economic viability of a wind farm depends heavily on the consistency and speed of the wind. Most commercial wind turbines require a minimum average wind speed of approximately six to eight meters per second to generate a significant amount of electricity. If speeds are too low, the energy captured is insufficient to cover installation and maintenance costs. Therefore, careful site selection using wind mapping is essential.

68. (B) Traditional biomass combustion in chulhas is highly efficient and pollution-free.
Traditional biomass combustion in open chulhas is notoriously inefficient, converting only a small fraction of fuel into useful heat. Furthermore, it releases significant amounts of smoke and particulate matter, leading to severe indoor air pollution and respiratory health issues. Modern biomass technologies, such as gasifiers and briquettes, offer much cleaner and more efficient alternatives, helping to reduce carbon emissions and improve the quality of life.

69. (C) 5 to 7 meters
Tidal energy generation relies on the difference in height between high and low tides to

Downloaded from www.pdf.tube

CHAPTER 07

Agriculture, Food Security and Green Revolution

NODIA

1. The length of the growing season and crop choice in a particular region of India are most significantly dictated by which two factors?
(A) Technology and market proximity
(B) Subsidies and transport infrastructure
(C) Landholding size and seed availability
(D) Soil type and climate

2. The red color of Red Soil is predominantly attributed to the presence of:
(A) High concentration of organic humus in the upper soil layers.
(B) Presence of large calcium carbonate nodules in the subsoil.
(C) Diffusion of iron within crystalline and metamorphic rocks.
(D) Accumulation of magnesium and potassium mineral compounds.

3. Read the following statements regarding agricultural employment in India:
Statement I: The absolute number of people dependent on agriculture has drastically reduced to less than twenty percent over the last decade.
Statement II: Agriculture continues to absorb a large workforce due to a lack of adequate employment opportunities in the secondary and tertiary sectors.
Which of the above statement(s) is/are correct?
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

4. The following question consists of two statements — Assertion (A) and Reason (R). Answer the question by selecting the appropriate option.
Assertion (A): Tank irrigation is highly significant and prevalent in Peninsular India.
Reason (R): The undulating relief and hard rock terrain of Peninsular India make it difficult to dig wells and canals, while natural depressions act as good reservoirs.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

5. Which of the following is the primary reason for the high agricultural suitability of older alluvial soils (Bangar) compared to newer ones (Khadar)?
(A) Bangar is frequently renewed by floods making it naturally fertile.
(B) Khadar is finer and more fertile, making the premise of the question incorrect.
(C) Khadar contains higher concentrations of kankar nodules restricting root growth.
(D) Bangar has higher moisture retention capacity suitable for dryland farming.

6. Which of the following regions is least dependent on canal irrigation?
(A) Northern Plains
(B) North-Eastern Hilly Terrain
(C) Coastal Deltas
(D) Western Himalayas

7. Which of the following statements best describes the structural significance of agriculture in the Indian economy?
(A) It accounts for the largest overall share of the national Gross Domestic Product.
(B) It serves as the primary source of livelihood

46. The 'Per Drop More Crop' initiative is a vital component of which of the following government schemes?
(A) Paramparagat Krishi Vikas Yojana
(B) Pradhan Mantri Krishi Sinchayee Yojana
(C) Pradhan Mantri Fasal Bima Yojana
(D) National Food Security Mission

47. Identify the incorrect statement about sugarcane cultivation in India:
(A) India is the original home of the sugarcane plant.
(B) It requires cold temperatures and frost to accumulate sucrose.
(C) It can be grown on a variety of soils ranging from laterite to black soils.
(D) Sugarcane is a labor-intensive crop from sowing to harvesting.

48. Pulses in India are crucial not only for protein security but also for agricultural sustainability because:
(A) They require heavy irrigation and thus increase soil moisture.
(B) They help restore soil fertility by fixing atmospheric nitrogen.
(C) They are immune to all types of pests and diseases.
(D) They yield higher economic returns than cash crops like sugarcane.

49. The introduction of Bt Cotton in India was primarily aimed at:
(A) Providing resistance against the pink bollworm pest
(B) Increasing drought resistance in arid regions
(C) Creating a cotton variety that requires no fertilizers
(D) Developing a naturally colored cotton fiber

50. Consider the following statements regarding the cultivation of pulses in India:
I. India is the largest producer as well as the largest consumer of pulses in the world.
II. Pulses are leguminous crops that help restore soil fertility.
III. Arhar (Tur) fixes atmospheric nitrogen, similar to all other pulses.
IV. Madhya Pradesh is one of the leading pulse-producing states in India.
V. Pulse production faces challenges due to low productivity and vulnerability to pests.
Which of the above statement(s) is/are correct?
(A) I, II, IV and V only
(B) II, III, IV and V only
(C) I, III and IV only
(D) I, II, III, IV and V

51. Plantation agriculture is best characterized by:
(A) Shifting cultivation practices by local tribal communities.
(B) Diverse food crop cultivation on fragmented landholdings.
(C) Total reliance on seasonal monsoons without any investment.
(D) A transport network connecting estate areas to markets.

52. Rice, a staple food crop for a majority of the Indian population, is predominantly classified as a:
(A) Zaid crop
(B) Rabi crop
(C) Plantation crop
(D) Kharif crop

53. In regions with less rainfall, such as Punjab and Haryana, rice is cultivated primarily through:
(A) Rainfed agriculture
(B) Dryland farming techniques
(C) Assured irrigation via canals and tube wells
(D) Zero tillage farming

54. The sugar industry in India has shown a tendency to shift towards southern and western states like Maharashtra in recent years. What is the primary cause for this shift?
(A) The soil in northern India has completely lost its fertility.
(B) Northern states have banned the cultivation of sugarcane due to water scarcity.
(C) The cane produced in southern/western states has a higher sucrose content.
(D) Sugarcane cultivation requires winter frost, which is available in the south.

55. Commercial crops in India are primarily cultivated for:
(A) Sale in the market to generate cash income
(B) Self-consumption by the farmer's household
(C) Soil reclamation and erosion control
(D) Meeting the fodder requirements of village

Click Here to Buy book on Amazon

(A) Soft alluvial soil allows for easy digging of wells and tube wells.
(B) Complete absence of perennial rivers throughout the entire region.
(C) Failure of the existing canal irrigation systems to provide water.
(D) Strict government ban on the use of river water for crop farming.

18. In the context of factors affecting agriculture, how does the adoption of modern technology primarily impact crop production?
(A) By enhancing crop yield per hectare through improved inputs
(B) By decreasing the need for irrigation entirely
(C) By increasing the total geographical landmass of the country
(D) By replacing all manual labor with autonomous machinery

19. Which of the following best explains the limitation of laterite soils for agricultural purposes?
(A) They are highly alkaline and prone to chronic waterlogging.
(B) They are found exclusively in sub-zero alpine environments.
(C) They possess an excessive water retention capacity causing rot.
(D) They suffer intense leaching of nutrients from heavy rainfall.

20. Consider the following statements regarding alluvial soils in India:
I. They are formed by the depositional work of rivers.
II. They are generally rich in potash but deficient in nitrogen and humus.
III. They are highly suitable for the cultivation of wheat, rice, and sugarcane.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II and III

21. Tank irrigation is a traditional and vital source of agricultural water primarily in which of the following states?
(A) Punjab
(B) Haryana
(C) Tamil Nadu
(D) Uttar Pradesh

22. Which of the following is an exception to the general features of plantation agriculture in India?
(A) It necessitates substantial amounts of long-term capital investment.
(B) It emphasizes the production of short-duration seasonal food crops.
(C) It involves the cultivation of a single crop over a very large area.
(D) It requires a highly labor-intensive approach to crop management.

23. Which of the following soil types covers the largest geographical area in India and is considered the most agriculturally productive?
(A) Red Soil
(B) Laterite Soil
(C) Black Soil
(D) Alluvial Soil

24. Which of the following is the most dominant source of irrigation in India?
(A) Canals
(B) Tanks
(C) Drip irrigation networks
(D) Groundwater (Wells and Tube wells)

25. Black cotton soil, also known as Regur soil, is exceptionally suitable for dryland farming due to its:
(A) High porosity and poor water retention capacity
(B) Ability to retain moisture for long periods
(C) High concentration of nitrogenous compounds
(D) Loose and sandy texture

26. Which of the following defines subsistence farming?
(A) Farming intended to maximize revenue through large-scale international exports.
(B) Cultivation of single cash crops on estates using modern scientific methods.
(C) Integration of large-scale crop production with commercial dairy operations.
(D) Farming focused primarily on meeting the consumption needs of the family.

NODIA

27. The Indira Gandhi Canal, one of the largest canal systems in India, primarily provides irrigation water to which of the following states?
(A) Rajasthan
(B) Madhya Pradesh
(C) Gujarat
(D) Maharashtra

28. Match the major soil types of India in List I with their primary regional distribution in List II:
List I: Soil Types
P. Alluvial Soil
Q. Black Soil
R. Red Soil
S. Laterite Soil
List II: Regional Distribution
1. Deccan trap region including parts of Maharashtra and Madhya Pradesh
2. Northern plains and river valleys
3. Areas of high temperature and heavy rainfall like Western Ghats
4. Eastern and southern parts of the Deccan Plateau
(A) P-2, Q-1, R-4, S-3
(B) P-1, Q-2, R-3, S-4
(C) P-2, Q-4, R-1, S-3
(D) P-3, Q-1, R-4, S-2

29. Laterite soils are most suitable for the plantation of which of the following crops, provided adequate manure and fertilizers are used?
(A) Cotton and Sugarcane
(B) Wheat and Barley
(C) Tea, Coffee, and Cashew nuts
(D) Jute and Maize

30. Which of the following is a negative consequence of extensive canal irrigation in regions with alluvial soil, such as Punjab and Haryana?
(A) Drastic and permanent reduction in the regional ground water table.
(B) Total and complete loss of all essential soil organic matter.
(C) Rapid transformation of fertile alluvial soil into laterite soil.
(D) Increased incidence of soil alkalinity and surface waterlogging.

31. Which of the following states is the largest producer of wheat in India?
(A) Punjab
(B) Haryana
(C) Uttar Pradesh
(D) Madhya Pradesh

32. Cotton grows best in which type of soil?
(A) Alluvial Soil
(B) Black Soil
(C) Laterite Soil
(D) Mountain Soil

33. Drip irrigation is highly efficient because:
(A) It floods fields quickly to ensure maximum soil saturation.
(B) It delivers water to the root zone, minimizing evaporation.
(C) It relies on traditional wheels to distribute water locally.
(D) It removes the need for applying fertilizers in the fields.

34. Match the commercial and plantation crops in List I with their corresponding leading producing regions in List II:
List I: Crops
P. Jute
Q. Rubber
R. Tea
S. Coffee
List II: Producing Regions
1. Kerala
2. Assam
3. West Bengal
4. Karnataka
(A) P-3, Q-1, R-2, S-4
(B) P-1, Q-2, R-3, S-4
(C) P-3, Q-4, R-2, S-1
(D) P-2, Q-3, R-4, S-1

35. Wheat is a Rabi crop that requires:
(A) A cool growing season and bright sunshine at the time of ripening
(B) High temperature and high humidity throughout its lifecycle
(C) Continuous standing water in the fields
(D) Extensive laterite soils for optimum growth

36. Madhya Pradesh holds a dominant position nationally in the production of which of the following commercial crops?
(A) Soybean
(B) Jute

Downloaded from www.pdf.tube

(C) Rubber
(D) Tea

37. Identify the incorrect statement concerning tank irrigation:
(A) It is dependable as tanks rarely dry up during droughts.
(B) It is relatively less expensive than building multipurpose dams.
(C) Siltation reduces the storage capacity of tanks over time.
(D) It relies primarily on seasonal rainfall for replenishment.

38. Which of the following is a primary challenge hindering the massive expansion of pulse production in India?
(A) Ban on pulse exports by the World Trade Organization
(B) Pulses deplete soil nutrients faster than any cereal crop
(C) Lack of domestic demand for pulses among the Indian population
(D) Cultivation of pulses is largely relegated to marginal and rainfed lands

39. Sugarcane belongs to the grass family and requires a hot and humid climate. It takes roughly how long to mature?
(A) 2 to 3 months
(B) 4 to 6 months
(C) 10 to 14 months
(D) 24 to 36 months

40. Which of the following crops is utilized both as food for humans and fodder for livestock, requiring temperatures between 21°C to 27°C and growing well in old alluvial soil?
(A) Wheat
(B) Rice
(C) Cotton
(D) Maize

41. Arrange the following processes of tea cultivation and processing in the correct logical sequence:
I. Plucking of tender leaves
II. Drying and roasting
III. Rolling and fermentation
IV. Pruning of bushes
Select the correct order from the options given below:
(A) IV, I, III, II
(B) I, IV, II, III
(C) IV, I, II, III
(D) I, III, IV, II

42. Consider the following statements regarding the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):
I. It aims to achieve convergence of investments in irrigation at the field level.
II. It exclusively promotes major dam construction over micro-irrigation.
III. Expanding cultivable area under assured irrigation (Har Khet ko Pani) is one of its objectives.
IV. It promotes precision water application techniques like drip and sprinkler irrigation.
Which of the above statement(s) is/are correct?
(A) I, II and III
(B) I, III and IV
(C) II, III and IV
(D) I, II, III and IV

NODIA

43. Which among the following sets entirely consists of commercial crops?
(A) Rice, Wheat, Barley
(B) Cotton, Jute, Sugarcane
(C) Moong, Urad, Arhar
(D) Maize, Bajra, Ragi

44. The "Green Revolution belt" for wheat primarily encompasses which of the following regions?
(A) The coastal plains of Tamil Nadu and Andhra Pradesh
(B) The deltaic regions of West Bengal and Odisha
(C) The hilly terrains of Uttarakhand and Himachal Pradesh
(D) Punjab, Haryana, and western Uttar Pradesh

45. The cultivation of oilseeds in India is crucial for the agricultural economy. Which of the following is the largest produced oilseed in India?
(A) Mustard
(B) Groundnut
(C) Soybean
(D) Sunflower

83. What was the primary advantage of the dwarf varieties of wheat introduced during the Green Revolution?
(A) They required no irrigation during the growing season.
(B) They could grow in saline soils without special treatment.
(C) They repelled all agricultural pests through natural means.
(D) They prevented lodging when the grain ear became heavy.

84. Unlike the first Green Revolution, the Second Green Revolution strongly emphasizes:
(A) Exclusive cultivation of wheat
(B) Total dependence on imported synthetic fertilizers
(C) Rainfed agriculture, pulses, oilseeds, and horticulture
(D) Elimination of the Minimum Support Price system

85. How did the Green Revolution impact India's food security status at the macroeconomic level?
(A) It increased India's reliance on food aid from the United States.
(B) It caused a shift from food crops to cash crops, creating severe famines.
(C) It transformed India from a food-deficient nation to a self-sufficient and exporting nation.
(D) It solely benefited the export market, ignoring domestic needs.

86. Rubber is an equatorial crop, but under special conditions, it is also grown in tropical and sub-tropical areas. It requires:
(A) Low temperatures below 10°C and scant rainfall
(B) Moist and humid climate with rainfall of more than 200 cm
(C) Dry desert climate with extensive canal irrigation
(D) High altitudes above 3000 meters

87. What is the primary objective of focusing on horticulture in the recent agricultural strategies?
(A) To replace all cereal crops with fruit orchards
(B) To improve nutritional security and augment farmers' income
(C) To strictly cater to the raw material needs of the textile industry
(D) To increase the acreage of water-guzzling crops

88. High Yielding Variety (HYV) seeds, central to the Green Revolution, fundamentally required which of the following accompanying inputs to achieve optimum yields?
(A) Traditional organic manure and rainfed conditions
(B) Assured irrigation and heavy doses of chemical fertilizers
(C) Deep plowing and minimum labor
(D) Extensive use of animal traction and zero tillage

89. Which of the following best describes the ecological limitation of the Green Revolution?
(A) The promotion of excessive and unplanned crop diversification.
(B) Loss of genetic diversity and soil health deterioration.
(C) The adoption of organic practices which are hard to sustain.
(D) The total elimination of machinery causing physical fatigue.

90. The overuse of chemical fertilizers, particularly nitrogenous fertilizers, in Green Revolution areas has primarily led to:
(A) Contamination of groundwater and soil degradation
(B) Enhanced long-term soil health
(C) A proportional decrease in the need for irrigation
(D) Improved organic carbon content in the soil

91. The concept of Targeted Public Distribution System (TPDS), introduced in 1997, differs from the earlier PDS primarily by:
(A) Providing food grains free of cost to the entire population
(B) Differentiating beneficiaries into Below Poverty Line (BPL) and Above Poverty Line (APL) categories
(C) Distributing only cash instead of physical food grains
(D) Transferring the entire procurement responsibility to private corporations

Click Here to Buy book on Amazon

livestock

56. Which of the following is the most appropriate application of sprinkler irrigation?
(A) Undulating terrains where uniform water application is difficult
(B) Paddy fields requiring continuous standing water
(C) Deep-rooted tree plantations like rubber
(D) Areas with extremely highly saline groundwater

57. Jute is famously known as the 'Golden Fibre'. What is the primary factor affecting the Indian jute industry in the global market today?
(A) Stiff competition from synthetic substitutes like nylon
(B) Lack of raw jute production in India post-independence
(C) High toxicity of jute fibers preventing their use in packaging
(D) Absence of water resources in West Bengal for retting jute

58. Which of the following agro-climatic requirements is essential for optimal rice cultivation?
(A) High temperature (above 25°C) and high humidity with annual rainfall above 100 cm
(B) Low temperature and dry climate with less than 50 cm rainfall
(C) Moderate temperature and frost-free days with light winter showers
(D) Cool growing season and bright sunshine at the time of ripening

59. Which of the following groups of states represents the major cotton-producing belt in India?
(A) Assam, West Bengal, Odisha
(B) Himachal Pradesh, Uttarakhand, Sikkim
(C) Maharashtra, Gujarat, Madhya Pradesh
(D) Kerala, Goa, Tamil Nadu

60. Identify the correct statement regarding wheat cultivation in Madhya Pradesh:
(A) Madhya Pradesh relies exclusively on winter rains to grow wheat without artificial irrigation.
(B) Madhya Pradesh has emerged as a leading producer of wheat, contributing significantly to the central pool.
(C) Wheat cultivation in Madhya Pradesh is declining due to unfavorable red soils.
(D) Sharbati wheat, a premium variety, is predominantly grown in the coastal areas of the state.

61. The strategy of the Green Revolution in its initial phase was heavily concentrated on which two crops?
(A) Pulses and Oilseeds
(B) Cotton and Sugarcane
(C) Wheat and Rice
(D) Millets and Maize

62. The Green Revolution has been criticized for exacerbating regional inequalities in India. Which of the following regions remained largely untouched during its first phase?
(A) Eastern India (e.g., Bihar, Odisha, Assam)
(B) Western Uttar Pradesh
(C) Punjab
(D) Haryana

63. Coffee cultivation in India is primarily confined to which of the following regions?
(A) Nilgiri Hills in Karnataka, Kerala, and Tamil Nadu
(B) Aravali Hills
(C) Khasi and Garo Hills in Meghalaya
(D) Satpura Range in Madhya Pradesh

64. Consider the following statements regarding the focus on pulses and oilseeds in the Second Green Revolution:
I. It aims to reduce India's heavy import bill for edible oils and pulses.
II. It promotes crop diversification to break the wheat-rice monoculture.
III. It discourages cultivation in rainfed areas to save seeds.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II and III

65. Consider the following statements regarding the adoption of High Yielding Variety (HYV) seeds in India:
I. Their adoption initially bypassed small and

Downloaded from www.pdf.tube

for most of the population.
(C) It acts as the exclusive destination for foreign investment in the rural sector.
(D) It maintains the highest capital-to-output ratio among all primary sectors.

8. The characteristic self-ploughing property of black cotton soil is primarily due to which of the following phenomena?
(A) High content of iron and aluminum oxides
(B) Formation of deep cracks during the hot dry season
(C) Presence of large amounts of coarse sand
(D) Frequent earthworm activity during monsoons

9. Identify the correct pair from the following regarding soil types and their limitations:
(A) Alluvial Soil - Severely deficient in potash and phosphorus
(B) Red Soil - Generally poor in nitrogen, phosphorus, and humus
(C) Black Soil - Requires heavy daily irrigation due to rapid water percolation
(D) Laterite Soil - Naturally rich in organic matter and highly fertile without fertilizers

10. Identify the incorrect statement regarding the factors influencing agriculture in India:
(A) The uneven distribution of rainfall necessitates the development of artificial irrigation.
(B) Soil characteristics directly determine the type of crops that can be successfully cultivated in a region.
(C) Technological interventions like mechanization have equally benefited all small and marginal farmers across states.
(D) Climate dictates the sowing and harvesting seasons of the Kharif and Rabi crops.

11. Which of the following correctly describes a geographical advantage of tank irrigation in southern India?
(A) Tanks prevent the evaporation of water during the hot summer months.
(B) Tanks automatically replenish groundwater tables in neighboring states.
(C) The soft alluvial soil facilitates the natural formation of deep tanks.
(D) The natural topography allows easy accumulation of rainwater.

12. Identify the correct pair representing a farming type and its key characteristic:
(A) Commercial Farming - Heavy reliance on family labor and primitive tools.
(B) Plantation Agriculture - Cultivation of multiple crops simultaneously on small landholdings.
(C) Mixed Farming - Equal emphasis on crop cultivation and livestock rearing on the same farm.
(D) Subsistence Farming - Extensive use of chemical fertilizers and high-yielding variety seeds.

13. Find the odd one out among the following regarding the characteristics of Black Soil:
(A) Rich in phosphorus and organic matter
(B) High moisture retention
(C) Rich in calcium carbonate and magnesium
(D) Swells and becomes sticky when wet

14. Which of the following regions is generally devoid of significant alluvial soil deposits?
(A) Indo-Gangetic Plains
(B) Brahmaputra Valley
(C) Central Highlands of Madhya Pradesh
(D) Eastern Coastal Plains

NODIA

15. Which of the following is a major challenge associated with conventional canal irrigation in India?
(A) It drastically improves soil aeration.
(B) It strictly requires the use of micro-sprinklers.
(C) It solely relies on monsoon rainfall for its functioning.
(D) It leads to the problem of waterlogging and subsequent soil salinity.

16. The phenomenon of disguised unemployment in India is most predominantly observed in which of the following sectors?
(A) Agriculture
(B) Manufacturing
(C) Information Technology
(D) Mining

17. What is the primary reason for the high reliance on groundwater irrigation in northern India?

permanently
(B) Dramatic improvement in the natural fertility of the soil
(C) Development of pest resistance and disruption of local ecosystems
(D) Immediate reduction in the cost of agricultural inputs

75. The concept of the 'Evergreen Revolution', propounded by M.S. Swaminathan, essentially refers to:
(A) Planting evergreen trees around all local agricultural fields.
(B) Shifting the focus from food agriculture to forest management.
(C) Returning to pre-industrial methods of subsistence farming.
(D) Achieving productivity gains without causing ecological harm.

76. The Darjeeling and Nilgiri regions are renowned worldwide for their premium quality production of:
(A) Coffee
(B) Rubber
(C) Cotton
(D) Tea

77. Which of the following is NOT a strategic focus area of the Second Green Revolution?
(A) Enhancing water use efficiency
(B) Promoting soil health management
(C) Expanding post-harvest infrastructure and value addition
(D) Encouraging the use of outdated indigenous tools over mechanization

78. Norman Borlaug, acknowledged globally as the 'Father of the Green Revolution', was awarded the Nobel Peace Prize primarily for developing high-yielding, disease-resistant varieties of:
(A) Rice
(B) Maize
(C) Soybean
(D) Wheat

79. What is the cause-and-effect relationship regarding groundwater in the context of the Green Revolution?
(A) Shift to commercial crops caused a rise in groundwater levels.
(B) Cultivation of water-intensive crops like paddy in semi-arid regions led to severe groundwater depletion.
(C) Use of chemical fertilizers improved soil porosity, increasing groundwater recharge.
(D) Construction of large dams entirely mitigated any groundwater depletion issues.

80. Match the aspects of the Green Revolution in List I with their corresponding impacts in List II:
List I: Aspects of Green Revolution
P. HYV Seeds
Q. Chemical Fertilizers
R. Assured Irrigation
S. Pesticides
List II: Impacts/Features
1. Groundwater depletion in Punjab and Haryana
2. Caused biomagnification in the food chain
3. Short-statured plants preventing crop lodging
4. Led to soil acidification and micro-nutrient deficiency
(A) P-3, Q-4, R-1, S-2
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-3, R-2, S-1
(D) P-2, Q-1, R-4, S-3

81. Food security at the national level implies not only the availability of food but also:
(A) The export of surplus grain to various neighboring countries.
(B) State-enforced rationing systems for all essential goods.
(C) Economic and physical access to nutritious food for all.
(D) Mandatory cultivation of food crops by every rural household.

82. The immediate need for launching the Green Revolution in India in the mid-1960s was driven by:
(A) Severe food shortages and heavy reliance on food imports like the PL-480 program
(B) The desire to export agricultural machinery to neighboring countries
(C) The goal to replace all food crops with high-value commercial crops
(D) A mandate issued by the United Nations to standardize global agriculture

Click Here to Buy book on Amazon

marginal farmers due to high input costs.
II. The seeds were highly responsive to chemical fertilizers.
III. They led to a decrease in the demand for irrigation water.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II and III

66. Consider the following statements regarding the Evergreen Revolution:
I. It emphasizes the integration of ecological principles into technology development.
II. It strictly forbids the use of any modern scientific innovations in farming.
III. It advocates for the conservation of biodiversity and equitable distribution of benefits.
IV. It promotes 'precision agriculture' to optimize inputs.
Which of the above statement(s) is/are correct?
(A) I, II and III
(B) I, III and IV
(C) II, III and IV
(D) I, II, III and IV

67. Which of the following conditions is unsuitable for tea cultivation?
(A) Warm and moist frost-free climate throughout the year
(B) Frequent, evenly distributed showers over the year
(C) Stagnant water around the root zone
(D) Deep, fertile, well-drained soil rich in humus

68. Which state became the 'granary of India' as the most prominent beneficiary of the Green Revolution in wheat production?
(A) Madhya Pradesh
(B) Punjab
(C) Maharashtra
(D) West Bengal

69. The term "Second Green Revolution" was coined to address the limitations of the first. What is its primary geographical focus?
(A) Expanding agricultural productivity in Eastern India
(B) Re-intensifying agriculture in Punjab and Haryana
(C) Promoting agriculture in the desert regions of Rajasthan
(D) Developing plantation estates in the Western Ghats

70. Who among the following is widely recognized as the key architect of the Green Revolution in India?
(A) Verghese Kurien
(B) C. Subramaniam
(C) M.S. Swaminathan
(D) Homi J. Bhabha

71. Which of the following represents the three core dimensions of food security?
(A) Availability, Access, Utilization
(B) Production, Procurement, Processing
(C) Storage, Transport, Distribution
(D) Import, Export, Buffer stocking

NODIA

72. Which of the following represents the correct sequential order of events that paved the way for the Green Revolution in India?
(A) Introduction of HYV seeds → Severe consecutive droughts → Independence → Record wheat production
(B) Independence → Severe consecutive droughts → Introduction of HYV seeds → Record wheat production
(C) Record wheat production → Independence → Introduction of HYV seeds → Severe consecutive droughts
(D) Introduction of HYV seeds → Record wheat production → Independence → Severe consecutive droughts

73. Find the odd one out among the positive achievements of the Green Revolution:
(A) Attainment of self-sufficiency in food grains
(B) Development of strong forward and backward industrial linkages
(C) Rise in agricultural productivity per hectare
(D) Equitable distribution of agricultural growth across all Indian states

74. Which of the following was a direct consequence of the widespread use of chemical pesticides during the Green Revolution?
(A) Complete eradication of all crop diseases

92. Which Indian state holds the distinction of becoming the first fully organic farming state in the world?
(A) Kerala
(B) Madhya Pradesh
(C) Sikkim
(D) Uttarakhand

93. Under the National Food Security Act (NFSA) 2013, for the purpose of the issuance of ration cards, who is recognized as the head of the household?
(A) The eldest male member of the household
(B) The member of the household with the highest income
(C) The eldest female member of the household aged 18 years or above
(D) The local Gram Panchayat Sarpanch

94. Consider the following statements regarding Zero Budget Natural Farming (ZBNF):
I. It promotes the use of local earthworms over imported species.
II. It insists on chemical fertilizer use only during severe pest attacks.
III. Mulching and soil aeration are key components of the method.
IV. It aims to pull farmers out of the debt trap associated with high input costs.
Which of the above statement(s) is/are correct?
(A) I, II and III
(B) I, III and IV
(C) II, III and IV
(D) I, II, III and IV

95. Which of the following crop groups is primarily covered under the MSP regime announced by the Government of India?
(A) Exclusively plantation crops like tea and coffee
(B) Major cereals, pulses, oilseeds, and certain commercial crops
(C) Only fruits, vegetables, and flowers
(D) Exclusively genetically modified crops

96. Which of the following poses a significant challenge to India's agricultural export ambitions?
(A) Global demand exceeding the nation's port infrastructure.
(B) High pesticide residues leading to consignment rejection.
(C) Absence of diverse agro-climatic zones within the country.
(D) Lack of a statutory body to regulate the export of goods.

97. The dimension of 'Utilization' in food security specifically refers to:
(A) The physical presence of food items in the local markets.
(B) The purchasing power of individuals to buy essential food.
(C) The capability to utilize food reserves during times of war.
(D) The body's ability to absorb nutrients through clean water.

98. Under the Pradhan Mantri Fasal Bima Yojana (PMFBY), what is the uniform premium rate payable by farmers for all Kharif crops?
(A) 1.5%
(B) 2.0%
(C) 5.0%
(D) 10.0%

99. The certification of organic products in India for exports is regulated by:
(A) Food Safety and Standards Authority of India (FSSAI)
(B) Agricultural and Processed Food Products Export Development Authority (APEDA) under NPOP
(C) Ministry of Environment, Forest and Climate Change
(D) NITI Aayog

100. The nodal agency at the central level responsible for procuring, storing, and transporting food grains for the central pool is:
(A) NAFED
(B) NABARD
(C) Food Corporation of India (FCI)
(D) Ministry of Commerce

101. Match the agricultural initiatives/reforms in List I with their primary objectives in List II:
List I: Agricultural Initiatives/Reforms
P. e-NAM
Q. APMC Act
R. PM-KISAN
S. PMFBY

Downloaded from www.pdf.tube

ANSWERS

1. (D) Soil type and climate
The agricultural productivity and choice of vegetation in different Indian regions are fundamentally determined by environmental conditions. Local weather patterns, including temperature and moisture availability, define the specific timeframe for planting and harvesting. Additionally, the physical and chemical properties of the ground dictate which specific varieties of food or commercial crops can be successfully cultivated.

2. (C) Diffusion of iron within crystalline and metamorphic rocks.
This specific soil variety derives its characteristic reddish appearance from the presence of iron oxides spread through its structure. These minerals are typically found within crystalline igneous or metamorphic rock formations that have undergone weathering over time. In a more hydrated form, the same material can appear yellowish, indicating different moisture levels within the local geological environment.

3. (B) Statement I is incorrect but Statement II is correct.
While the share of farming in the national economy has declined, a massive portion of the population remains dependent on it for work. The secondary and tertiary sectors have not yet generated enough jobs to absorb the surplus labor. Consequently, many people continue to work on farms despite the existence of significant disguised unemployment in rural areas.

4. (A) Both A and R are true and R is the correct explanation of A.
The hard, rocky terrain and uneven relief of the southern plateau make the construction of canals or deep wells extremely difficult and expensive. However, the presence of natural depressions allows for the efficient collection of seasonal rainwater. This geographical reality makes storing water in large surface basins a highly practical and prevalent method for regional agricultural irrigation.

5. (B) Khadar is finer and more fertile, making the premise of the question incorrect.
New alluvial deposits consist of fine-grained particles that are refreshed annually during the monsoon flood season. This constant renewal makes these areas more naturally fertile and suitable for intensive cultivation than the older, coarser deposits. The presence of fewer calcareous concentrations allows for better root penetration and nutrient uptake for most seasonal crops throughout the floodplains.

6. (B) North-Eastern Hilly Terrain
Canal irrigation systems require flat topography and deep soil to facilitate the distribution of water over large areas. Rugged, mountainous regions in the northeast lack the level ground necessary for such networks. Instead, farmers in these parts rely on alternative methods like bamboo drip systems or seasonal rainfall to meet their agricultural water requirements for hillside cultivation.

NODIA

7. (B) It serves as the primary source of livelihood for most of the population.
Agriculture remains the backbone of the Indian socio-economic structure because it employs a vast majority of the national workforce. Although its contribution to the total gross domestic product has seen a steady relative decline, more than half of the citizens still depend on farm-related activities for their daily sustenance, household income, and general economic security.

8. (B) Formation of deep cracks during the hot dry season
During the summer, certain clay-rich soils lose moisture and develop wide, deep fissures. This process allows for the natural aeration of the soil and facilitates the movement of surface material into the lower layers when the rains begin. This unique physical behavior mimics the action of mechanical plowing, keeping the earth fertile, loose, and ready for cultivation.

international market when prices peak
(C) Ensure that agricultural laborers receive their wages in kind
(D) Create artificial scarcity to keep open market prices high

109. Arrange the following states in descending order based on their total area certified under organic farming in India:
I. Madhya Pradesh
II. Maharashtra
III. Rajasthan
Select the correct order from the options given below:
(A) I, II, III
(B) III, II, I
(C) II, I, III
(D) I, III, II

110. The following question consists of two statements — Assertion (A) and Reason (R). Answer the question by selecting the appropriate option.
Assertion (A): Pradhan Mantri Fasal Bima Yojana (PMFBY) was launched to provide financial support to farmers suffering from crop loss.
Reason (R): Indian agriculture is highly exposed to natural risks like droughts, floods, and unseasonal rains.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

111. A key strategic intervention required to boost India's agricultural exports, particularly for perishable commodities, is:
(A) Increasing export duties
(B) Banning the use of drip irrigation
(C) Abolishing all quality certification standards
(D) Developing robust cold chain and post-harvest infrastructure

112. Which of the following is a recurrent challenge associated with the Public Distribution System (PDS) in India?
(A) Excessive and over-consumption of nutritious local millets.
(B) Leakages, grain diversion, and errors in identifying beneficiaries.
(C) A complete and total lack of domestic food grain production.
(D) Prohibition of state governments from participating in distribution.

113. The core objective of announcing the Minimum Support Price (MSP) before the sowing season is to:
(A) Limiting the specific amount of crops a farmer may grow.
(B) Informing global markets about national export potential.
(C) Protecting farmers from price declines during the harvest.
(D) Forcing private traders to pay all market taxes upfront.

114. A major challenge restricting the mass adoption of organic farming by Indian farmers is:
(A) The organic food market is non-existent in urban India.
(B) Initial yields during the transition period generally decline, causing income loss.
(C) Organic farming requires heavy investments in chemical pesticides.
(D) The government has banned the sale of organic products.

115. Identify the incorrect statement regarding the Pradhan Mantri Fasal Bima Yojana (PMFBY):
(A) It covers post-harvest losses caused by unseasonal rainfall.
(B) The premium paid by the farmer for commercial and horticultural crops is 5%.
(C) The scheme uses technology like remote sensing and drones for quick crop yield estimation.
(D) It is entirely funded by the farmers without any government subsidy on premiums.

116. The Public Distribution System (PDS) in India functions primarily through a network of:
(A) Private supermarkets
(B) Agricultural Produce Market Committees (APMCs)
(C) Primary Agricultural Credit Societies
(D) Fair Price Shops (FPS)

Click Here to Buy book on Amazon

36. (A) Soybean
Central India has become a major hub for the production of protein-rich oilseeds due to favorable climatic conditions and appropriate soil types. The region accounts for a significant portion of the total national output of this specific commercial crop. This development has helped strengthen the local economy and provides a vital raw material for the edible oil and animal feed industries.

37. (A) It is dependable as tanks rarely dry up during droughts.
Surface reservoirs are highly dependent on the annual monsoon to replenish their water levels. If the rains fail, these basins can quickly lose their capacity due to high evaporation and a lack of fresh inflow. Furthermore, the accumulation of silt over many years can reduce their storage volume, making them an unreliable source of water during prolonged periods of drought.

38. (D) Cultivation of pulses is largely relegated to marginal and rainfed lands
Protein-rich leguminous crops are often grown in areas where irrigation is unavailable and the soil quality is relatively poor. Farmers tend to prioritize water-intensive cereals for their best land, leaving these essential crops vulnerable to the vagaries of the monsoon. This lack of assured water and quality land results in lower overall productivity and slower growth in national production.

39. (C) 10 to 14 months
This tall tropical grass requires a long duration to complete its lifecycle and accumulate sucrose in its stalks. Depending on the regional climate and the specific variety planted, it typically stays in the field for about a year. During this time, it needs consistent warmth, abundant moisture, and significant labor for various activities like weeding, manuring, and final harvesting.

40. (D) Maize
This versatile crop is valued for its multiple uses in both human diets and as a primary ingredient in livestock nutrition. It thrives in well-drained, older alluvial plains where temperatures remain moderate. Its ability to grow quickly and provide high energy content makes it a popular choice for farmers looking for a reliable food source that also has commercial value.

41. (A) IV, I, III, II
The production of this beverage involves a series of carefully managed steps to ensure the final quality of the leaves. It begins with maintaining the bushes through regular trimming to encourage the growth of fresh shoots. Once these tender leaves are collected, they undergo chemical changes during processing before being finalized through heat treatment for packaging and consumption.

42. (B) I, III and IV
This national initiative focuses on optimizing water usage at the farm level through various strategic interventions. It seeks to coordinate investments across different departments to expand the area under assured irrigation. By promoting precision techniques like micro-irrigation and improving local water sources, the program aims to increase overall agricultural productivity while conserving precious resources for the future.

43. (B) Cotton, Jute, Sugarcane
These specific crops are primarily cultivated to be sold in the market or used as raw materials in large-scale industries rather than for direct household consumption. They are vital to the national economy as they support the textile and sugar sectors and provide significant cash income for farmers. Their production requires specialized knowledge, significant inputs, and access to processing facilities.

44. (D) Punjab, Haryana, and western Uttar Pradesh
The initial phase of agricultural modernization in the late twentieth century was concentrated in these northern regions. They possessed the necessary infrastructure, including reliable canal networks and fertile soils, to support high-yielding varieties of winter cereals. This geographical focus led to a massive increase in food production, transforming these states into the primary suppliers for the national grain reserves.

45. (C) Soybean
This particular oilseed has gained immense importance in the agricultural sector due to its

NODIA

126. A major criticism of the traditional APMC mandi system has been:
(A) It leads to cartelization of traders and multiple layers of mandi fees and commissions.
(B) It eliminates all middlemen, harming the rural economy.
(C) It pays farmers in advance before the crop is harvested.
(D) It only permits the sale of fully processed, packaged foods.

127. Consider the following statements regarding the PM-KISAN scheme:
I. It is a Central Sector scheme with 100% funding from the Government of India.
II. State Governments hold the responsibility of identifying the eligible farmer families.
III. The financial benefit is transferred directly into the bank accounts of beneficiaries.
IV. It aims to supplement the financial needs of farmers to procure various inputs.
V. It was introduced to entirely replace the Minimum Support Price (MSP) mechanism.
Which of the above statement(s) is/are correct?
(A) I, II, III and IV only
(B) II, III, IV and V only
(C) I, III and V only
(D) I, II, III, IV and V

128. Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) provides income support to farmer families. What is the nature of this financial support?
(A) A subsidized annual agricultural loan of Rs. 60,000 per year.
(B) A one-time waiver of all outstanding regional farm loans.
(C) A monthly pension of Rs. 3,000 for all farmers over age 60.
(D) A direct benefit transfer of Rs. 6,000 per year in three parts.

129. How does e-NAM specifically benefit the farmers?
(A) It automatically doubles crop yields through online monitoring.
(B) It facilitates transparent price discovery and gives access to a larger number of buyers across the country.
(C) It guarantees the purchase of all produce by the Central Government.
(D) It provides free organic certification for all listed products.

NODIA

130. The continuous modernization of Indian agriculture through schemes like PMKSY, e-NAM, and PM-KISAN is collectively aimed at achieving which broad national vision?
(A) Doubling farmers' income and ensuring sustainable agrarian growth
(B) Eradicating all agricultural exports
(C) Nationalizing all agricultural lands
(D) Reverting to traditional barter systems for food security

www.nodia.in

private tube wells to ensure a steady water supply for their crops regardless of the monsoon.

18. (A) By enhancing crop yield per hectare through improved inputs
The integration of modern scientific tools and superior quality seeds directly increases the efficiency of land use. By utilizing chemical fertilizers, effective pesticides, and controlled irrigation, farmers can produce a much larger quantity of food from the same area. This intensification of production is essential for meeting the growing food demands of a large and expanding national population.

19. (D) They suffer intense leaching of nutrients from heavy rainfall.
In regions with high temperatures and heavy precipitation, the upper layers of the soil lose their soluble minerals and organic matter. This natural process leaves behind an acidic material rich in iron and aluminum oxides but poor in vital nutrients. Consequently, these soils require significant amounts of external inputs and careful management to become productive for plantation agriculture.

20. (D) I, II and III
These soils are created through the accumulation of silt and minerals carried by large river systems from the mountains to the plains. They are characterized by high levels of potash but generally lack nitrogen and humus content. Their excellent texture and nutrient profile make them exceptionally fertile, supporting major food grains and essential commercial crops across the country.

21. (C) Tamil Nadu
The southern region of India relies heavily on surface basins for water storage due to its rocky topography and hard subsoil. These structures capture monsoon rains and serve as the primary source of irrigation for local agriculture. This traditional method is particularly well-developed in areas where digging deep wells or constructing extensive canal networks is not geographically or economically feasible.

22. (B) It emphasizes the production of short-duration seasonal food crops.
This specialized form of agriculture involves growing a single commercial crop over a vast area for an extended period. It requires massive capital investment, advanced technology, and a large labor force to manage the estates. Unlike traditional farming, it focuses on long-term crops like tea, coffee, or rubber, which are processed locally and then transported to larger markets.

23. (D) Alluvial Soil
Deposits of silt and sediment brought down by the Himalayan river systems cover nearly forty percent of the country's landmass. These areas are characterized by deep, fertile layers that are highly responsive to irrigation and modern agricultural inputs. Because they support the majority of India's cereal production, they are considered the most economically and strategically significant soil type.

24. (D) Groundwater (Wells and Tube wells)
Private wells and mechanized tube wells have become the most widespread method for providing water to crops across the country. This system offers farmers greater control over the timing and quantity of water application compared to traditional canals or seasonal rainfall. The ease of installation in many regions has led to its dominance in both northern and western agricultural belts.

25. (B) Ability to retain moisture for long periods
This soil type is composed of extremely fine clay particles that swell and become sticky when they absorb water. Once saturated, it can hold moisture in the root zone for a significant amount of time, even during dry spells. This characteristic is vital for crops like cotton, which require a steady supply of water to develop properly during the season.

26. (D) Farming focused primarily on meeting the consumption needs of the family.
This traditional method of cultivation is designed to ensure the survival of the farm household rather than generating a surplus for the market. Farmers typically use primitive tools and rely on natural rainfall and family labor on small, fragmented plots. Most of the produced grain is

Downloaded from www.pdf.tube

9. (B) Red Soil - Generally poor in nitrogen, phosphorus, and humus
Red soils are formed through the weathering of crystalline and metamorphic rocks in low-rainfall areas. These soils typically lack essential nutrients like nitrogen and phosphorus, and their organic matter content is quite low. Consequently, they require the regular application of chemical fertilizers or organic manure to support the healthy growth of various commercial crops in these regions.

10. (C) Technological interventions like mechanization have equally benefited all small and marginal farmers across states.
While technological progress has transformed parts of the agricultural sector, the benefits have been unevenly distributed. High costs associated with advanced machinery and modern inputs often put them out of reach for small-scale cultivators. Consequently, large landowners in specific regions have gained significantly more than marginal farmers, leading to increased disparities within the rural economy and society.

11. (D) The natural topography allows easy accumulation of rainwater.
The undulating relief of the southern peninsula creates natural depressions that are ideal for collecting and storing monsoon runoff. This geographic feature eliminates the need for expensive excavation in hard rock terrain. By utilizing these local basins, communities can effectively manage water resources for irrigation during the dry months, supporting crops throughout the traditional agricultural cycle.

12. (C) Mixed Farming - Equal emphasis on crop cultivation and livestock rearing on the same farm.
This agricultural system integrates plant cultivation with the raising of animals on a single landholding. By combining these activities, farmers can diversify their income sources and reduce risks associated with market fluctuations. Additionally, livestock provides valuable organic manure for the fields, while crop residues serve as fodder, creating a sustainable and mutually beneficial cycle within the farm.

13. (A) Rich in phosphorus and organic matter
Regur soils are characterized by their high clay content and remarkable ability to retain moisture for long periods. Chemically, they are rich in lime, iron, magnesium, and alumina, which makes them highly suitable for cotton cultivation. However, they are naturally deficient in phosphorus, nitrogen, and organic matter, contrary to common misconceptions about their nutrient composition and overall chemistry.

14. (C) Central Highlands of Madhya Pradesh
The river valleys and coastal deltas of India are primarily defined by sediment deposits brought down by large perennial systems. However, the upland regions of the central plateau consist mostly of ancient crystalline and volcanic rock formations. Consequently, these highlands do not possess the deep, fertile layers of silt typically found in the northern plains or the eastern coastlines.

15. (D) It leads to the problem of waterlogging and subsequent soil salinity.
Extensive use of surface irrigation can lead to the excessive accumulation of water in the root zones of plants. This condition prevents proper aeration and eventually brings harmful salts to the surface through capillary action. Over time, the land becomes saline and unproductive, which is a major environmental concern in regions where intensive irrigation practices are common.

16. (A) Agriculture
In the rural sector, it is common to find more workers engaged in farming than are actually required to perform the necessary tasks. This surplus labor does not contribute to the overall output of the land. This phenomenon occurs because of the lack of alternative employment opportunities in other sectors, forcing family members to share limited work.

17. (A) Soft alluvial soil allows for easy digging of wells and tube wells.
The geological composition of the northern plains consists of deep layers of loose sediment deposited by Himalayan rivers. This soft earth makes it technically feasible and cost-effective to penetrate the ground and access underground aquifers. As a result, farmers can easily install

NODIA

List II: Primary Objectives
1. Regulation of agricultural markets to protect farmers from exploitation
2. Creating a unified national market for agricultural commodities
3. Providing direct income support to landholding farmer families
4. Providing insurance coverage against crop failure

(A) P-2, Q-1, R-3, S-4
(B) P-1, Q-2, R-4, S-3
(C) P-2, Q-3, R-1, S-4
(D) P-3, Q-1, R-4, S-2

102. Match the food security mechanisms in List I with their primary functions in List II:
List I: Food Security Mechanisms
P. Food Corporation of India (FCI)
Q. Minimum Support Price (MSP)
R. Fair Price Shops (FPS)
S. Buffer Stock
List II: Functions
1. Distribution of essential commodities at subsidized rates
2. Maintaining food grain reserves for emergencies and price stabilization
3. Procurement and storage of food grains at the central level
4. Guaranteeing a floor price to farmers to prevent distress sale

(A) P-3, Q-4, R-1, S-2
(B) P-4, Q-3, R-2, S-1
(C) P-3, Q-1, R-4, S-2
(D) P-2, Q-4, R-1, S-3

103. The basic premise of Organic Farming relies on:
(A) The use of genetically modified seeds to resist pests
(B) Avoiding or largely excluding the use of synthetically compounded fertilizers, pesticides, and growth regulators
(C) Relying entirely on synthetic fertilizers to boost immediate yield
(D) Using hydroponics in multi-story urban buildings

104. Which of the following represents the correct sequence of events in the public procurement system of India?
(A) Announcement of MSP → Harvesting → Procurement by FCI → Storage → Allocation to states under PDS
(B) Procurement by FCI → Announcement of MSP → Allocation to states → Storage → Harvesting
(C) Allocation to states → Storage → Procurement by FCI → Harvesting → Announcement of MSP
(D) Announcement of MSP → Procurement by FCI → Storage → Harvesting → Allocation to states

105. India's Agriculture Export Policy primarily aims to:
(A) Ban all agricultural exports to ensure domestic food security
(B) Subsidize agricultural imports from developed countries
(C) Double agricultural exports and integrate Indian farmers with global value chains
(D) Export raw materials only and restrict value-added products

106. Identify the incorrect statement regarding the National Food Security Act (NFSA), 2013:
(A) It legally entitles up to 75% of the rural population to receive subsidized food grains.
(B) It covers up to 50% of the urban population under targeted public distribution.
(C) It completely abolishes the Antyodaya Anna Yojana (AAY) scheme.
(D) It includes special provisions for nutritional support to pregnant women and lactating mothers.

107. Zero Budget Natural Farming (ZBNF), famously pioneered in states like Andhra Pradesh and Karnataka, advocates for:
(A) Eliminating the cost of inputs by using natural treatments like cow dung and urine (Jivamrita)
(B) Taking massive zero-interest loans from agricultural banks
(C) Distributing land freely to landless laborers
(D) Employing heavily subsidized imported genetically modified seeds

108. Buffer stocking in India is maintained by the government primarily to:
(A) Resolve the problem of food shortages during lean years and natural calamities
(B) Maximize profits by selling grains in the

Click Here to Buy book on Amazon

stored for home use, with very little remaining for sale in local trade.

27. (A) Rajasthan
This massive engineering project was designed to bring water from the Harike Barrage in Punjab to the arid regions of the Thar Desert. By providing a perennial water source, the canal has transformed vast areas of wasteland into productive agricultural zones. It has enabled farmers in northwestern India to cultivate crops like wheat and cotton in once-barren environments.

28. (A) P-2, Q-1, R-4, S-3
Soil distribution across the Indian subcontinent follows distinct geological and climatic patterns. River valleys and northern plains are characterized by extensive sediment deposits, while the Deccan trap is defined by volcanic basalt formations. Arid regions on the plateau typically contain iron-rich reddish earth, whereas areas with heavy precipitation and high temperatures develop highly leached, nutrient-poor surfaces in various ranges.

29. (C) Tea, Coffee, and Cashew nuts
While naturally low in nutrients due to intense leaching, these acidic soils can be made highly productive with proper management. The addition of organic manure and chemical fertilizers allows them to support specialized plantation crops in hilly and coastal regions. They are particularly well-suited for high-value items that thrive in moist, tropical environments where drainage is efficient and rainfall is abundant.

30. (D) Increased incidence of soil alkalinity and surface waterlogging.
The excessive application of water through surface channels often causes the groundwater table to rise dangerously close to the surface. This leads to the accumulation of harmful salts in the upper layers, which can eventually render the land unfit for farming. This environmental degradation is a significant side effect of intensive irrigation practices in parts of northwestern India today.

31. (C) Uttar Pradesh
The vast plains of northern India provide the ideal environment for the large-scale cultivation of winter cereals. Due to its extensive land area and favorable irrigation facilities, one specific state consistently leads the country in total output. The combination of fertile alluvial soil and access to canal networks ensures high productivity, contributing the largest share to the national food reserves.

32. (B) Black Soil
This specific fiber crop requires a environment that can hold water effectively while also providing essential minerals like lime and magnesium. The volcanic origin of the earth in the western and central parts of the country provides these exact conditions. The soil's unique ability to retain moisture throughout the growing season makes it the most suitable medium for this plant.

33. (B) It delivers water to the root zone, minimizing evaporation.
This precision irrigation method uses a network of pipes and emitters to provide small amounts of water directly to the base of each plant. By avoiding the flooding of entire fields, it significantly reduces the loss of water through runoff and surface evaporation. This efficiency makes it an ideal solution for water-scarce regions and high-value horticultural crops.

34. (A) P-3, Q-1, R-2, S-4
Agricultural production in India is highly regionalized based on specific environmental needs for each crop. Fiber crops flourish in the humid delta regions of the east, while latex-producing trees require the tropical conditions of the southwest. Traditional beverage crops are concentrated in the humid northeastern hills and the cool southern ranges, where soil and slope are optimal.

35. (A) A cool growing season and bright sunshine at the time of ripening
This essential cereal requires specific thermal conditions during different stages of its development. It thrives when temperatures are low during the initial growth period, followed by warm, clear weather during the final weeks. This transition ensures that the grain matures properly and has a high nutritional quality, making the winter season in the northern plains perfectly suitable for it.

NODIA

117. Who is widely credited with the development and promotion of the Zero Budget Natural Farming (ZBNF) model in India?
(A) M.S. Swaminathan
(B) Verghese Kurien
(C) Norman Borlaug
(D) Subhash Palekar

118. Minimum Support Price (MSP) is recommended by which of the following bodies?
(A) NITI Aayog
(B) Reserve Bank of India (RBI)
(C) Indian Council of Agricultural Research (ICAR)
(D) Commission for Agricultural Costs and Prices (CACP)

119. Paramparagat Krishi Vikas Yojana (PKVY) is a central government scheme primarily focused on promoting:
(A) Organic farming through cluster approach
(B) High density planting of cash crops
(C) Extensive use of chemical fertilizers
(D) Construction of large irrigation dams

120. Which of the following issues has arisen as a negative consequence of an open-ended procurement policy backed by high MSP for rice and wheat?
(A) Depleted groundwater and distorted cereal-focused cropping patterns.
(B) Severe shortage of rice and wheat in government-owned godowns.
(C) Drastic reduction in the total income of big farmers in the North.
(D) Elimination of the functional role of the Food Corporation of India.

121. Which of the following categories of individuals is excluded from receiving benefits under the PM-KISAN scheme?
(A) Institutional landholders and professionals like doctors and engineers
(B) Small and marginal farmers holding less than 2 hectares of land
(C) Farmers cultivating crops entirely dependent on rainfall
(D) Female farmers holding agricultural land in their name

122. The National Agriculture Market (e-NAM) is a pan-India electronic trading portal that seeks to:
(A) Replace all physical mandis with virtual warehouses
(B) Regulate the international prices of agricultural goods
(C) Distribute agricultural loans directly to farmers' smartphones
(D) Network the existing APMC mandis to create a unified national market for agricultural commodities

123. The Agricultural Produce Market Committee (APMC) acts were originally established by state governments to:
(A) Forcing farmers to sell produce at the lowest market prices.
(B) Taking complete state ownership of all regional farm lands.
(C) Regulating markets to ensure pricing transparency for farmers.
(D) Facilitating direct export of produce to the foreign markets.

124. The direct income support provided under PM-KISAN is critical because it:
(A) Preventing the migration of farmers into neighboring cities.
(B) Helping farmers meet costs and reducing debt dependence.
(C) Requiring farmers to surrender land to corporate entities.
(D) Compelling farmers to grow only high-value export crops.

125. Which of the following represents the correct order of the typical agricultural marketing supply chain in India prior to modern reforms?
(A) Farmer → Village Trader → Commission Agent → Wholesaler → Retailer → Consumer
(B) Farmer → Retailer → Wholesaler → Commission Agent → Village Trader → Consumer
(C) Consumer → Retailer → Wholesaler → Commission Agent → Village Trader → Farmer
(D) Farmer → Consumer → Retailer → Wholesaler → Commission Agent → Village Trader

Downloaded from www.pdf.tube

high protein and oil content. It is now the most widely cultivated crop in its category across the country, particularly in the central plains. Its versatility for both human consumption and industrial use has made it a preferred choice for farmers seeking reliable market demand.

46. (B) Pradhan Mantri Krishi Sinchayee Yojana
This government program emphasizes the efficient use of every unit of water available for agricultural purposes. By encouraging the adoption of micro-irrigation systems, it aims to reduce wastage and ensure that crops receive moisture directly where it is most needed. This approach is essential for sustaining farming in arid regions and improving the overall water productivity of the nation.

47. (B) It requires cold temperatures and frost to accumulate sucrose.
This tropical plant thrives best in hot and humid climates with temperatures ranging between twenty-one and twenty-seven degrees Celsius. It is highly sensitive to freezing conditions, which can severely damage the crop and reduce its sugar content. While it can grow in various soil types, it requires a long, frost-free growing season to reach its full potential and maturity.

48. (B) They help restore soil fertility by fixing atmospheric nitrogen.
Leguminous plants possess a unique biological capability to capture nitrogen from the air through symbiotic bacteria in their roots. This process naturally enriches the ground, reducing the need for synthetic chemical fertilizers in subsequent seasons. For this reason, these crops are often grown in rotation with cereals to maintain a healthy and productive agricultural ecosystem over the long term.

49. (A) Providing resistance against the pink bollworm pest
The introduction of genetically modified fiber crops was a strategic move to combat widespread losses caused by specific destructive insects. These modified plants produce a protein that is toxic to certain pests, thereby reducing the need for frequent chemical spraying. This technology has helped farmers protect their yields and lower the environmental impact of traditional pesticide applications in major belts.

50. (A) I, II, IV and V only
India plays a dominant role globally in the production and use of protein-rich leguminous crops. These plants are essential for maintaining land health due to their nitrogen-fixing properties, although one specific variety is an exception to this rule. Despite their importance, the sector faces hurdles such as low yields and pest vulnerability, which are being addressed through various regional strategies.

51. (D) A transport network connecting estate areas to markets.
This large-scale agricultural system is characterized by its integration with industrial processing and efficient logistical chains. Because the produce is intended for trade rather than home use, having reliable roads and railways is essential for moving harvested goods quickly to processing units or ports. This infrastructure ensures that the high-value commercial crops remain fresh and reach consumers in optimal condition.

NODIA

52. (D) Kharif crop
This vital food grain is primarily grown during the summer monsoon season when temperatures are high and rainfall is abundant. It requires significant moisture throughout its growth cycle, often needing submerged conditions in the fields. Because it is sown at the beginning of the rains and harvested in the autumn, it forms the foundation of the rainy-season agricultural calendar.

53. (C) Assured irrigation via canals and tube wells
In areas where natural precipitation is insufficient to meet the high water demands of summer grains, farmers rely on man-made systems. Modern engineering allows for the extraction of groundwater and the diversion of river water to sustain these crops. This technological intervention has enabled states with semi-arid climates to become major contributors to the national production of staple food grains.

54. (C) The cane produced in southern/western states has a higher sucrose content.
The shift of the sweetening industry toward the western and southern regions is driven by favorable climatic conditions. The coastal influence and longer crushing seasons in these

122. (D) Network the existing APMC mandis to create a unified national market for agricultural commodities
This national electronic trading portal serves to integrate various local markets across different states into a single platform. By removing physical barriers to trade, it allows for more transparent price discovery and reduces the influence of local cartels. This digital infrastructure ensures that farmers can sell their produce to the highest bidder anywhere in the country, increasing their overall bargaining power.

123. (C) Regulating markets to ensure pricing transparency for farmers.
These regional bodies were established to protect producers from unfair trade practices by creating organized spaces for the sale of agricultural goods. They provide a structured environment where prices are determined through open auctions and where weighing and payments are monitored by the state. This system was designed to give farmers a fair chance to sell their produce at competitive market rates.

124. (B) Helping farmers meet costs and reducing debt dependence.
Providing direct cash transfers to rural households helps them cover the essential costs of seeds, fertilizers, and labor at the start of each season. This timely financial support reduces the need for farmers to take high-interest loans from private moneylenders, which often leads to a cycle of debt. By improving their cash flow, the program strengthens the financial stability of small-scale producers.

125. (A) Farmer → Village Trader → Commission Agent → Wholesaler → Retailer → Consumer
The journey of agricultural products from the field to the dinner plate involves multiple intermediaries, each performing a specific role in the trade and logistics chain. This traditional structure often includes local collectors, regional middlemen, and large-scale traders before the goods reach the final retail store. Understanding this complex network is essential for identifying ways to improve efficiency and ensure better prices for producers.

126. (A) It leads to cartelization of traders and multiple layers of mandi fees and commissions.
The traditional regulated market system has been criticized for becoming less competitive over time due to the dominance of a small number of powerful buyers. These traders can sometimes work together to keep prices low, while the various taxes and fees charged at the market can reduce the final amount received by the farmer. Modern reforms aim to address these inefficiencies by introducing more competition.

127. (A) I, II, III and IV only
This major national program provides direct financial assistance to millions of rural families to help them manage the costs of farming. It is fully funded by the central government, though the identification of eligible recipients is handled by local authorities. By using digital technology to send money directly to bank accounts, the scheme ensures transparency and efficiency, supporting the overall goal of agricultural modernization.

128. (D) A direct benefit transfer of Rs. 6,000 per year in three parts.
This income support initiative provides a fixed amount of cash to eligible rural households in regular installments throughout the year. The money is sent directly to the farmers' bank accounts, ensuring that they have the funds needed for agricultural inputs when they are most required. This consistent support acts as a vital safety net, helping to supplement the family's total annual earnings.

129. (B) It facilitates transparent price discovery and gives access to a larger number of buyers across the country.
The transition to digital trading allows producers to look beyond their local market and connect with a wider range of potential purchasers. By seeing real-time price information from across the nation, farmers can make better decisions about when and where to sell their goods. This increased competition and transparency help ensure that cultivators receive a fair market value for their hard work.

Click Here to Buy book on Amazon

STUDYING FROM PDFs?

THINK AGAIN.

If you are studying only from PDFs,
you are wasting valuable time.

Research shows that learning from

PRINTED BOOKS has up to

4× HIGHER RETENTION

than studying from screens.

PRINT BOOK = BETTER MEMORY

PDF = LOWER RETENTION

Those who study from **PRINTED BOOKS**
move **AHEAD.**

Others are left **BEHIND**
in competition.

In competitive exams,
being average is not enough.

STAY ONE STEP AHEAD.

cool climate, rich soil, and well-drained slopes required for the plants to thrive. The unique geographical features of these hills contribute to the distinct flavor and high quality of the beans produced, which are highly valued in international markets.

64. (A) I and II only
Modern agricultural strategies now prioritize the production of protein-rich crops and oilseeds to reduce the nation's reliance on expensive imports. By encouraging farmers to diversify away from traditional cereal monocultures, these initiatives aim to improve both nutritional security and land health. These efforts are particularly focused on integrating these crops into existing farming systems to create a more balanced agricultural economy.

65. (A) I and II only
The introduction of advanced seed varieties required a significant shift in farming practices and a higher level of financial investment. These seeds were designed to be highly responsive to chemical fertilizers and controlled water supply, making them more productive but also more expensive to cultivate. Initially, this meant that only farmers with sufficient resources could fully participate in the transition to modern methods.

66. (B) I, III and IV
This sustainable approach to farming focuses on achieving long-term productivity gains without compromising the health of the environment. it combines modern scientific innovations with ecological principles to ensure that agricultural growth is both equitable and environmentally sound. By prioritizing biodiversity and the efficient use of resources, it seeks to create a resilient food system that can support future generations indefinitely.

67. (C) Stagnant water around the root zone
The cultivation of this evergreen shrub requires a climate that is consistently warm and moist, but it is extremely sensitive to poor drainage. While the plants need frequent rainfall to encourage the growth of tender leaves, any accumulation of water in the ground can cause the roots to rot and eventually kill the bush. Therefore, it is grown on slopes.

68. (B) Punjab
This northern state became the symbol of agricultural success during the late twentieth century due to its rapid adoption of modern technology. Its advanced irrigation systems and hard-working farming community allowed it to produce a massive surplus of food grains. Today, it continues to be one of the most important contributors to the national food reserves, earning it a prestigious reputation.

69. (A) Expanding agricultural productivity in Eastern India
Recent initiatives are specifically designed to bring the benefits of modern farming to regions that were previously bypassed. By focusing on the eastern states, the government aims to utilize the abundant water resources and fertile soils found there to boost national output. This strategic shift is intended to reduce regional inequalities and ensure a more balanced distribution of agricultural growth.

70. (C) M.S. Swaminathan
This renowned scientist is celebrated for his visionary leadership in transforming the nation's agricultural sector. His work in introducing high-yielding varieties and promoting modern farming techniques was instrumental in achieving food self-sufficiency. Beyond his technical contributions, he advocated for sustainable practices and the welfare of farmers, leaving a lasting impact on the socio-economic fabric of the country and global food policy.

71. (A) Availability, Access, Utilization
Ensuring that every citizen has enough to eat requires a multi-dimensional approach that addresses various economic and physical factors. It involves making sure there is a sufficient supply of food, that people have the financial means to buy it, and that their bodies can effectively absorb the nutrients. Together, these elements form the foundation of a robust and healthy national population.

72. (B) Independence → Severe consecutive droughts → Introduction of HYV seeds → Record wheat production
The historical progression toward food self-sufficiency was marked by significant challenges and strategic shifts. After gaining the ability to

Downloaded from www.pdf.tube

89. (B) Loss of genetic diversity and soil health deterioration.
The focus on a few high-yielding varieties has led to a decline in the traditional range of crops grown, making the system more vulnerable to pests and diseases. Additionally, the intensive use of land and chemicals has depleted natural soil nutrients and affected the long-term fertility of the earth. These environmental costs highlight the need for more sustainable and ecologically balanced farming practices.

90. (A) Contamination of groundwater and soil degradation
The excessive application of synthetic nutrients can result in the leaching of harmful chemicals into the underground water supply, posing health risks to local communities. It also disrupts the natural balance of organisms in the earth, leading to a decline in organic matter and overall land health. Addressing these issues requires a shift toward more precise application and the use of organic alternatives.

91. (B) Differentiating beneficiaries into Below Poverty Line (BPL) and Above Poverty Line (APL) categories
This revised distribution system was designed to ensure that limited food resources reach those who need them most by creating specific groups based on economic status. By offering deeper subsidies to households with lower incomes, the government aims to improve food security for the most vulnerable sections of society. This targeted approach represents a significant shift from the previous universal distribution model.

92. (C) Sikkim
This small Himalayan state has gained international recognition for its commitment to sustainable agriculture by completely eliminating the use of chemical fertilizers and pesticides. By transitioning all of its farmland to natural methods, it has set a global example for environmental conservation and the production of healthy, high-quality food. This move has also helped promote eco-tourism and strengthened the local economy.

93. (C) The eldest female member of the household aged 18 years or above
To promote gender equality and empower women within the family structure, the national food law designates a specific person as the head for official documentation. This policy ensures that women have a direct role in managing the household's access to essential food supplies. It is a strategic social intervention aimed at improving the overall welfare and decision-making power of women in rural areas.

NODIA

94. (B) I, III and IV
This innovative farming model focuses on reducing the cost of production by using locally available natural inputs instead of expensive commercial products. It emphasizes the importance of soil health through aeration and covering the ground with organic material to retain moisture. By eliminating the need for loans to buy chemicals, it seeks to improve the financial independence and resilience of small-scale farmers.

95. (B) Major cereals, pulses, oilseeds, and certain commercial crops
The government provides a guaranteed floor price for a wide variety of essential agricultural commodities to protect producers from sudden market crashes. This list includes staple grains, protein-rich legumes, and various seeds used for oil production, covering the most strategically important parts of the sector. By ensuring a minimum return, this policy encourages continued investment and production by the farming community.

96. (B) High pesticide residues leading to consignment rejection.
Many international markets maintain strict standards regarding the presence of chemical contaminants in food products. When shipments do not meet these rigorous safety requirements, they are often turned back, causing significant financial losses for exporters. To overcome this hurdle, it is essential for farmers to adopt better management practices and move toward more natural and sustainable methods of pest control.

changes in the availability of regional water resources over time.

81. (C) Economic and physical access to nutritious food for all.
A truly secure food system ensures that every individual can consistently obtain the nutrition they need for a healthy life. This involves making food available in local markets and ensuring that people have the purchasing power to acquire it. It is not just about producing enough grain, but also about creating an inclusive distribution system that reaches everyone, regardless of their location.

82. (A) Severe food shortages and heavy reliance on food imports like the PL-480 program
In the mid-twentieth century, the nation faced a critical survival challenge due to its inability to produce enough grain for its growing population. This situation forced a heavy dependence on foreign aid and expensive imports, which threatened national sovereignty and economic stability. The urgent need to end this vulnerability drove the government to adopt transformative agricultural policies to achieve self-reliance.

83. (D) They prevented lodging when the grain ear became heavy.
The traditional varieties of cereal crops often had long, thin stalks that would bend or break when the grain heads grew large. The introduction of shorter, sturdier plants allowed for the application of more fertilizer and water to increase yields without the risk of the crop collapsing. This structural improvement was a key factor in achieving significantly higher production per hectare.

84. (C) Rainfed agriculture, pulses, oilseeds, and horticulture
Current agricultural strategies have shifted focus to include a wider range of crops and environments beyond traditional irrigated cereals. There is a strong emphasis on improving the productivity of protein-rich legumes and high-value fruits and vegetables, particularly in areas that depend on rainfall. This diversification aims to improve nutritional outcomes and make farming more profitable and resilient across the nation.

85. (C) It transformed India from a food-deficient nation to a self-sufficient and exporting nation.
The adoption of modern farming technologies fundamentally changed the country's economic position on the world stage. By dramatically increasing the production of staple grains, the nation moved from being a major importer to having a surplus for its own needs. This achievement has provided a strong foundation for national security and allows the country to play an active role in international trade.

86. (B) Moist and humid climate with rainfall of more than 200 cm
This important industrial crop thrives in tropical environments where moisture is abundant and temperatures remain consistently high. It requires a significant amount of annual precipitation, evenly distributed throughout the year, to produce high-quality latex. These specific conditions are found in the southwestern coastal regions, where it has become a major contributor to the local economy and industrial manufacturing.

87. (B) To improve nutritional security and augment farmers' income
The promotion of fruit and vegetable cultivation is a strategic move to diversify the agricultural sector and provide better economic opportunities for rural households. These high-value crops can generate more revenue per unit of land than traditional cereals and contribute to a more balanced diet for the population. This approach also helps reduce the risks associated with price fluctuations in major food grains.

88. (B) Assured irrigation and heavy doses of chemical fertilizers
These advanced seed varieties were scientifically developed to produce maximum yields only when provided with optimal amounts of moisture and nutrients. Without a reliable water supply and significant external inputs, they often perform no better than traditional types. Therefore, their success is entirely dependent on the availability of modern infrastructure and the ability of farmers to afford the necessary chemical supplements.

Click Here to Buy book on Amazon

govern itself, the nation faced critical shortages due to unfavorable weather patterns in the mid-1960s. This crisis prompted the adoption of new agricultural technologies, leading to a dramatic and unprecedented increase in the output of major food grains within a few years.

73. (D) Equitable distribution of agricultural growth across all Indian states
While the modernization of farming brought about self-sufficiency and strengthened industrial ties, the benefits were not felt equally in every part of the country. Some regions advanced rapidly due to better infrastructure and resource availability, while others lagged behind. This uneven progress created geographical disparities that have required targeted government interventions in subsequent decades to address and eventually rectify.

74. (C) Development of pest resistance and disruption of local ecosystems
The intensive use of chemical controls on farms has led to unintended biological consequences. Some harmful organisms have evolved to survive these treatments, requiring even stronger chemicals over time. Furthermore, these substances can kill beneficial insects and enter the local water supply, causing a decline in overall biodiversity and posing long-term risks to both environmental health and human well-being in rural areas.

75. (D) Achieving productivity gains without causing ecological harm.
This holistic vision for agriculture emphasizes the need to increase food production while simultaneously protecting the natural resource base. It advocates for the integration of traditional wisdom with modern science to ensure that farming remains sustainable over the long term. By focusing on soil health, water conservation, and biodiversity, it seeks to create a resilient system that benefits both people and nature.

76. (D) Tea
These high-altitude regions are world-famous for producing a premium beverage known for its unique aroma and flavor. The combination of cool mountain air, abundant rainfall, and well-drained slopes provides the perfect environment for these bushes to thrive. The leaves harvested from these areas are highly sought after by connoisseurs and contribute significantly to the country's reputation in international trade.

77. (D) Encouraging the use of outdated indigenous tools over mechanization
Modern agricultural strategies focus on improving efficiency and sustainability through the adoption of advanced technology and better management practices. They aim to optimize resource use, protect land health, and create value-added opportunities for farmers after the harvest. Contrary to returning to less productive methods, these initiatives seek to empower cultivators with modern scientific tools to meet contemporary global and domestic challenges.

78. (D) Wheat
This distinguished scientist dedicated his career to developing semi-dwarf varieties of cereal crops that could produce high yields under various conditions. His innovations in plant breeding helped avert widespread famine in several developing nations during the mid-twentieth century. By creating plants that were resistant to diseases and could support heavy grain heads, he laid the foundation for the global transformation of agricultural productivity.

79. (B) Cultivation of water-intensive crops like paddy in semi-arid regions led to severe groundwater depletion.
The shift toward growing moisture-demanding cereals in areas with limited rainfall has put a tremendous strain on underground water reserves. Farmers have increasingly relied on deep wells to sustain these crops, causing the water table to drop significantly over several decades. This unsustainable practice poses a serious threat to the future of agriculture and water security in many parts of the country.

80. (A) P-3, Q-4, R-1, S-2
The various components of modern farming have had both positive and negative impacts on the agricultural landscape. While advanced seeds prevented plants from falling over under the weight of grain, the heavy use of chemicals led to soil degradation and environmental contamination. Furthermore, the reliance on intensive water application has caused significant

NODIA

97. (D) The body's ability to absorb nutrients through clean water.
Having access to food is only one part of ensuring health; the body must also be in a condition to effectively process and use the nutrients provided. This requires access to safe drinking water, proper sanitation, and a healthy environment to prevent diseases that interfere with nutrient absorption. Therefore, this dimension links dietary intake with overall public health and the quality of local infrastructure.

98. (B) 2.0%
To make crop insurance more affordable and accessible, a uniform low rate has been established for all farmers growing major summer crops. This ensures that even small-scale cultivators can protect themselves against potential financial losses caused by natural disasters or unseasonal weather. The government provides a significant subsidy to cover the remaining cost of the premium, encouraging widespread participation in the scheme.

99. (B) Agricultural and Processed Food Products Export Development Authority (APEDA) under NPOP
The verification and standard-setting for natural farm products destined for international trade are handled by a specific national body. This authority ensures that all goods meet the required quality and environmental standards recognized by global trading partners. By providing a reliable certification process, it helps build trust in the quality of national exports and opens up new market opportunities for farmers.

100. (C) Food Corporation of India (FCI)
This central organization plays a vital role in managing the nation's food supplies by purchasing grain from farmers and ensuring its safe storage. It is responsible for transporting these stocks to various parts of the country to maintain availability and stabilize prices. Its work forms the backbone of the public distribution system, helping to ensure that food reaches those who need it most.

101. (A) P-2, Q-1, R-3, S-4
The government has introduced a variety of strategic interventions to improve the lives of farmers and modernize the agricultural sector. These initiatives range from creating digital trading platforms and regulating local markets to providing direct cash assistance and protective insurance. Together, they aim to reduce the risks faced by rural households and ensure a more transparent and profitable environment for agricultural trade.

102. (A) P-3, Q-4, R-1, S-2
Maintaining national food security involves several coordinated mechanisms that manage the supply, pricing, and distribution of essential grains. Some organizations focus on large-scale procurement and storage, while others ensure that farmers receive a fair price for their work. Additionally, a network of local shops provides subsidized goods to consumers, while strategic reserves are kept to handle emergencies and stabilize the market.

103. (B) Avoiding or largely excluding the use of synthetically compounded fertilizers, pesticides, and growth regulators
This sustainable approach to agriculture focuses on maintaining soil health and ecological balance by using natural materials and processes. It rejects the use of man-made chemicals, instead relying on crop rotation, green manure, and biological pest control. This method produces healthy food while protecting the environment from the harmful effects of synthetic inputs, making it increasingly popular with health-conscious consumers.

104. (A) Announcement of MSP → Harvesting → Procurement by FCI → Storage → Allocation to states under PDS
The management of the national food supply follows a logical sequence of events designed to protect both producers and consumers. It begins with the government setting a guaranteed price to guide farmers before they plant. Once the crops are collected, they are purchased by a central agency, kept in secure facilities, and eventually distributed to various regions for sale through subsidized channels.

105. (C) Double agricultural exports and integrate Indian farmers with global value chains
The national strategy for agricultural trade focuses on significantly increasing the volume of goods sold abroad to boost the rural economy.

Downloaded from www.pdf.tube

areas result in better crop quality and higher sugar yields per ton of raw material. Furthermore, the presence of cooperative societies in these states has improved the overall efficiency of processing and marketing.

55. (A) To sale in the market to generate cash income
These specific crops are grown with the primary intention of trade and profit rather than for the personal use of the farming family. They serve as essential raw materials for various industrial sectors and are often destined for international export. The revenue generated from these items allows farmers to purchase other necessities and invest in further improving their operations.

56. (A) Undulating terrains where uniform water application is difficult
This irrigation technique is particularly effective in regions with uneven land surfaces where traditional flooding would result in wasted water and soil erosion. By spraying water into the air like rain, it ensures that every part of the field receives an equal amount of moisture. This method is highly adaptable and helps maintain soil structure while optimizing water use efficiency.

57. (A) Stiff competition from synthetic substitutes like nylon
The traditional fiber industry faces a significant threat from the widespread availability of cheaper, man-made materials. These artificial alternatives are often more durable and easier to produce on a large scale for packaging and industrial use. To remain competitive, the sector must focus on its environmental benefits as a biodegradable and sustainable resource, while also improving processing technologies and quality.

58. (A) High temperature (above 25°C) and high humidity with annual rainfall above 100 cm
This major cereal thrives in hot, tropical environments where moisture is consistently available throughout the season. It needs a significant amount of water, often requiring the fields to be flooded during certain growth stages. These specific climatic conditions are found naturally in the eastern and coastal regions of the country, where it serves as the most important staple food crop.

59. (C) Maharashtra, Gujarat, Madhya Pradesh
The production of this essential fiber is concentrated in the western and central regions due to the presence of moisture-retentive volcanic soils. The climate in these states provides the long growing season and frost-free days necessary for the plants to mature and produce high-quality bolls. This agricultural belt is the primary source of raw material for the nation's massive textile industry.

60. (B) Madhya Pradesh has emerged as a leading producer of wheat, contributing significantly to the central pool.
Central India has seen a remarkable increase in the production of winter cereals due to improved irrigation and the adoption of modern farming practices. The region now plays a crucial role in ensuring national food security by providing a large surplus of high-quality grain. This growth has helped diversify the sources of food procurement and strengthened the overall agricultural economy of the state.

61. (C) Wheat and Rice
The transformation of the agricultural sector in the late twentieth century primarily targeted these two staple grains to achieve rapid food self-sufficiency. By introducing high-yielding seeds and intensive irrigation for these specific crops, the nation was able to dramatically increase its total output in a short period. This focus was essential for ending the country's dependence on foreign food aid.

62. (A) Eastern India (e.g., Bihar, Odisha, Assam)
The initial benefits of modern agricultural modernization were largely confined to regions with existing irrigation infrastructure and favorable socio-economic conditions. Consequently, many states in the eastern part of the country did not experience the same rapid growth in productivity as the northern and western belts. This regional disparity highlighted the need for more inclusive strategies in later phases of development.

63. (A) Nilgiri Hills in Karnataka, Kerala, and Tamil Nadu
The cultivation of this beverage crop is concentrated in the high-altitude regions of the southwest. These areas provide the necessary

NODIA

maintaining stable agricultural production and protecting rural livelihoods.

114. (B) Initial yields during the transition period generally decline, causing income loss.
Shifting from conventional to natural methods often involves a period where the soil takes time to recover its natural fertility. During these first few years, the output of the land may be lower than when chemical fertilizers were used, which can be a significant barrier for farmers with limited savings. To encourage adoption, support systems are needed to help cultivators manage this temporary financial gap.

115. (D) It is entirely funded by the farmers without any government subsidy on premiums.
This national insurance program is designed to be affordable for all farmers by keeping their direct costs to a minimum. The government pays a large portion of the required insurance fees, ensuring that the financial burden on the cultivator is significantly reduced. This public investment is essential for building a resilient agricultural sector that can withstand the increasing risks posed by climate change.

116. (D) Fair Price Shops (FPS)
The final link in the national food security chain consists of a vast network of local retail outlets that distribute subsidized grains to eligible households. These community-based stores ensure that essential commodities are available at affordable prices in both urban and rural areas. Their effective management is critical for the success of government programs aimed at ending hunger and improving public nutrition.

117. (D) Subhash Palekar
This influential figure has been a key advocate for self-reliant farming methods that avoid the use of industrial chemicals. His work has inspired thousands of farmers to return to natural processes, significantly reducing their production costs and improving land health. By focusing on the use of local biological materials, he has helped create a grassroots movement toward more sustainable and independent agricultural practices.

118. (D) Commission for Agricultural Costs and Prices (CACP)
The determination of guaranteed prices for agricultural goods is based on detailed analysis by a specialized advisory body. This organization examines various factors, including the cost of production, market trends, and the need for a fair return to the farmer. Their recommendations help the government strike a balance between supporting rural incomes and keeping food prices affordable for the general population.

119. (A) Organic farming through cluster approach
This central initiative promotes the adoption of chemical-free cultivation by encouraging groups of farmers to transition together. By working in clusters, communities can share knowledge, reduce certification costs, and more easily access markets for their natural products. This strategy aims to build sustainable agricultural zones across the country while improving soil quality and protecting the environment from synthetic pollutants over the long term.

120. (A) Depleted groundwater and distorted cereal-focused cropping patterns.
While the policy of buying large amounts of specific food grains has ensured national supplies, it has also led to unintended environmental and economic consequences. Many farmers have abandoned traditional, diverse crops in favor of water-intensive cereals that offer a guaranteed price. This shift has put immense pressure on local water resources and has created a less balanced and less resilient agricultural system.

121. (A) Institutional landholders and professionals like doctors and engineers
To ensure that financial support is targeted toward those who primarily depend on the land for their survival, certain high-income groups and organizations are not eligible for direct cash assistance. This policy focuses the program's limited resources on small-scale and marginal farmers who face the greatest economic challenges. By excluding those with alternative sources of wealth, the scheme aims to be more equitable.

Click Here to Buy book on Amazon

It seeks to connect local producers with international markets by improving quality standards and developing better infrastructure for processing and transport. By becoming a more active participant in global trade, the country aims to provide better income opportunities for its farming community.

106. (C) It completely abolishes the Antyodaya Anna Yojana (AAY) scheme.
This landmark social legislation provides a legal right to subsidized food for a vast majority of the population, including the poorest households. While it introduced new categories and expanded coverage, it did not eliminate existing programs designed for the most vulnerable citizens. Instead, it integrated them into a broader framework that also includes special nutritional support for women and children in rural areas.

107. (A) Eliminating the cost of inputs by using natural treatments like cow dung and urine (Jivamrita)
This farming philosophy advocates for a return to traditional, self-sustaining methods that do not require expensive commercial seeds or chemicals. By creating their own biological stimulants from locally available resources, farmers can significantly reduce their financial burden and avoid falling into debt. This approach emphasizes the importance of working with nature to maintain a productive and resilient agricultural ecosystem.

108. (A) Resolve the problem of food shortages during lean years and natural calamities
The government maintains large reserves of essential grains to ensure that the country can survive periods of poor harvest or unexpected emergencies. These stocks help to stabilize food prices in the open market and provide a steady supply for subsidized distribution programs. By having a reliable backup, the nation can protect its citizens from the threat of hunger and maintain social stability.

109. (D) I, III, II
The adoption of sustainable farming practices varies significantly across different regions based on local policies and environmental conditions. Some states have taken a clear lead in certifying large areas for natural cultivation to meet growing demand. These regional leaders are setting the pace for the rest of the country, demonstrating that large-scale transitions to chemical-free agriculture are both possible and economically viable.

110. (A) Both A and R are true and R is the correct explanation of A.
Farming in India is a high-risk activity due to its heavy reliance on unpredictable weather patterns and the frequent occurrence of natural disasters. To protect rural households from the devastating financial impact of crop failure, the government has established a comprehensive insurance program. This initiative provides a vital safety net, ensuring that farmers can recover and continue their operations even after severe losses.

NODIA

111. (D) Developing robust cold chain and post-harvest infrastructure
To increase the value and reach of agricultural exports, it is essential to improve the way harvested goods are handled and stored. Specialized facilities that maintain the freshness of perishable items are critical for reaching distant international markets. By investing in modern logistics and processing units, the country can reduce waste and ensure that farmers receive higher prices for their premium products.

112. (B) Leakages, grain diversion, and errors in identifying beneficiaries.
While the national food distribution network is vast, it faces ongoing challenges in ensuring that supplies reach the intended recipients without being lost to theft or mismanagement. Problems with record-keeping and the misidentification of eligible households can lead to inefficiencies and social frustration. Addressing these structural issues requires the use of modern technology and more transparent administrative processes at the local level.

113. (C) Protecting farmers from price declines during the harvest.
The government sets a minimum price for major crops before the season begins to provide a sense of financial security to producers. This ensures that even if there is a surplus in the market after the harvest, farmers will not be forced to sell their goods at a loss. This policy is a crucial tool for

130. (A) Doubling farmers' income and ensuring sustainable agrarian growth

Modernization efforts in the farm sector are designed to transform the rural economy into a more profitable and resilient system. By integrating digital markets, providing direct financial assistance, and improving irrigation efficiency, the government seeks to significantly increase the earnings of rural households. These strategies collectively aim to ensure long-term stability and environmental sustainability for future generations of agricultural producers.

www.nodia.in

NODIA

19. Which scheme was primarily launched by the Government of India to reduce the Infant Mortality Rate and promote institutional deliveries?
(A) Pradhan Mantri Awas Yojana
(B) Mahatma Gandhi National Rural Employment Guarantee Act
(C) PM Kisan Samman Nidhi
(D) Janani Suraksha Yojana

20. Match the items in List I with their corresponding definitions in List II and select the correct answer from the options given below.
List I: (Indicator)
P. Birth Rate
Q. Natural Growth Rate
R. Total Fertility Rate
S. Life Expectancy
List II: (Definition)
1. Average number of children a woman would have in her lifetime
2. Difference between births and deaths in a year
3. Live births per 1000 population per year
4. Average number of years a person is expected to live
(A) P-3, Q-2, R-1, S-4
(B) P-1, Q-2, R-3, S-4
(C) P-3, Q-1, R-2, S-4
(D) P-2, Q-3, R-1, S-4

21. Demographic Transition Theory postulates that all countries pass through various stages of population growth. In the first stage, what are the characteristics of birth and death rates?
(A) High birth rate and low death rate
(B) Low birth rate and high death rate
(C) High birth rate and high death rate
(D) Low birth rate and low death rate

22. The Census of India derives its statutory backing from which of the following legislations?
(A) The Constitution of India, Article 370
(B) The Census Act, 1948
(C) The Registration of Births and Deaths Act, 1969
(D) The Demographic Survey Act, 1955

23. Which of the following states recorded a negative decadal population growth rate in the 2011 Census?
(A) Kerala
(B) Goa
(C) Sikkim
(D) Nagaland

24. The significant decline in Maternal Mortality Ratio (MMR) in India over the last two decades can be chiefly attributed to which factor?
(A) Expansion of the rural road network
(B) Decrease in the average age of marriage
(C) Implementation of the Green Revolution
(D) Substantial increase in institutional deliveries

25. Which of the following explains the phenomenon where India's population continues to grow even after reaching replacement level fertility?
(A) Systematic under-reporting of mortality statistics within rural regions.
(B) Inherent population momentum among large cohorts of reproductive age.
(C) Improvements in life expectancy exclusively across the elderly demographic.
(D) Large-scale displacement of international refugees across national borders.

26. In which year was the first synchronous census of India conducted?
(A) 1872
(B) 1881
(C) 1901
(D) 1951

27. Based on demographic trends, which gender generally exhibits a higher life expectancy at birth in India currently?
(A) Females
(B) Males
(C) Both have identical life expectancy
(D) It varies randomly every year without a trend

28. The period of 1901-1921 is referred to as the period of stagnant or stationary phase of growth. Which of the following is the most appropriate cause for this?
(A) Both birth rate and death rate were exceptionally high.
(B) Birth rates dropped significantly while death rates remained high.
(C) Large scale emigration occurred due to

Downloaded from www.pdf.tube

9. Consider the following statements regarding Maternal Mortality Rate (MMR):
I. It is measured per 1,000 live births.
II. It reflects the number of maternal deaths during pregnancy or within 42 days of termination of pregnancy.
III. Assam generally records one of the highest MMRs in India.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II, and III

10. Which of the following historical phases of India's population growth (1951-1981) is most accurately described?
(A) Period characterized by stagnant growth
(B) Period of steady population expansion
(C) Period of rapid growth or explosion
(D) Period of high but declining growth

11. During which stage of the Demographic Transition Theory does population explosion typically occur?
(A) First stage
(B) Second stage
(C) Third stage
(D) Fourth stage

12. Which of the following statements about the Census of India is incorrect?
(A) It is conducted every ten years.
(B) The Office of the Registrar General and Census Commissioner conducts it.
(C) The census methodology relies exclusively on online voluntary submissions.
(D) The first non-synchronous census was conducted under Lord Mayo.

13. According to recent National Family Health Survey (NFHS-5) data, which of the following states has a Total Fertility Rate (TFR) significantly above the national average?
(A) Bihar
(B) Kerala
(C) Punjab
(D) Maharashtra

14. The natural growth rate of a population is calculated by observing the difference between which two indicators?
(A) Crude birth rate and infant mortality rate
(B) Total fertility rate and crude death rate
(C) Crude birth rate and crude death rate
(D) Net migration rate and crude birth rate

15. Read the following statements and select the correct answer from the given options:
Statement I: Madhya Pradesh has historically struggled with a higher Infant Mortality Rate (IMR) compared to the national average.
Statement II: Improvement in neonatal care units in district hospitals has shown no impact on IMR in Madhya Pradesh.
(A) Statement I is correct and Statement II is incorrect.
(B) Statement I is incorrect and Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

16. The term demographic dividend in the Indian context primarily refers to a period characterized by which of the following?
(A) A higher proportion of the working-age population relative to dependents.
(B) A sudden increase in birth rates resulting in a significant youth bulge.
(C) An expansion of the non-working elderly population requiring social care.
(D) A uniform distribution of human resources across various urban centers.

17. What is the denominator used to calculate the Maternal Mortality Ratio (MMR) globally and in India?
(A) 1,000 live births
(B) 10,000 live births
(C) 100,000 live births
(D) 1,000,000 live births

18. What was the decadal population growth rate of India during the 2001-2011 census period?
(A) 17.64 percent
(B) 21.54 percent
(C) 24.80 percent
(D) 15.22 percent

NODIA

77. The influx of remittances from migrants is beneficial for the source regions. However, what is a major negative impact of out-migration on rural source regions?
(A) Severe overcrowding of rural infrastructure
(B) Drastic increase in rural agricultural prices
(C) Industrial pollution within village boundaries
(D) Loss of young, able-bodied human resources

78. Consider the following statements regarding urbanization in India:
I. Urbanization has seen a massive increase due to natural growth and rural-to-urban migration.
II. Goa is the most urbanized state in India by percentage of population.
III. Himachal Pradesh has the highest proportion of rural population among Indian states.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II, and III

79. Seasonal migration or circular migration in India is most commonly associated with which economic sector?
(A) Information Technology
(B) Agriculture and unorganized construction
(C) Organized large-scale manufacturing
(D) International banking and finance

80. A person who was born in a place different from the place of enumeration is termed as:
(A) Migrant by place of last residence
(B) Seasonal migrant
(C) Commuter
(D) Migrant by place of birth

81. The long-term objective of the National Population Policy 2000 was to achieve a stable population by which year?
(A) 2025
(B) 2030
(C) 2045
(D) 2070

82. Settlements with a municipality, corporation, cantonment board, or notified town area committee are classified as:
(A) Statutory Towns
(B) Census Towns
(C) Urban Agglomerations
(D) Smart Cities

83. Which of the following is the largest urban agglomeration in India by population?
(A) Delhi
(B) Kolkata
(C) Chennai
(D) Greater Mumbai

84. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A): Rural-to-urban migration leads to the unchecked growth of slums in destination cities.
Reason (R): Destination cities always lack sufficient affordable housing and infrastructural capacity to absorb large influxes of poor migrants.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

85. Which of the following acts as a 'Pull' factor for rural-to-urban migration?
(A) Frequent natural disasters in rural areas
(B) Widespread caste conflicts in villages
(C) Better jobs and higher wages in cities
(D) Massive fragmentation of agricultural land

86. The percentage of urban population in India according to the 2011 Census is approximately:
(A) 27.8 percent
(B) 31.1 percent
(C) 35.5 percent
(D) 40.2 percent

87. The Narmada Valley Project caused significant displacement. Which demographic group was most heavily affected by it?
(A) Urban IT professionals

Click Here to Buy book on Amazon

colonial policies.
(D) Improvements in medical facilities reduced the death rate drastically.

29. Which state in India is widely recognized for achieving the lowest Infant Mortality Rate, comparable to developed nations?
(A) Gujarat
(B) Tamil Nadu
(C) Kerala
(D) Madhya Pradesh

30. Identify the incorrect pair regarding demographic terminology.
(A) Crude Birth Rate - Number of live births per 1,000 mid-year population.
(B) Crude Death Rate - Number of deaths per 1,000 mid-year population.
(C) Replacement Level Fertility - Total fertility rate at which a population exactly replaces itself.
(D) Infant Mortality Rate - Number of maternal deaths per 100,000 live births.

31. The dependency ratio is an age-population ratio of those typically not in the labor force to those in the labor force. How is it calculated?
(A) (Population aged 15-59) / (Population aged 0-14 + Population aged 60+)
(B) (Population aged 0-14) / (Population aged 60+)
(C) (Population aged 0-14 + Population aged 60+) / (Population aged 15-59)
(D) (Population aged 15-59) / (Total Population)

32. The gap between male and female literacy rates in India showed which trend between the 2001 and 2011 censuses?
(A) It increased significantly.
(B) It narrowed down.
(C) It remained exactly the same.
(D) It was completely eliminated.

33. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A): India's demographic dividend will automatically translate into rapid economic growth regardless of policy interventions.
Reason (R): A higher working-age population naturally consumes more goods, boosting the GDP.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

34. Match the States in List I with their characteristic population distribution features in List II and select the correct answer from the options given below.
List I: (State)
P. Uttar Pradesh
Q. Sikkim
R. Rajasthan
S. Maharashtra
List II: (Characteristic)
1. Highly populated due to industrial and urban centers like Mumbai
2. Highest total population in India
3. Low population density due to arid desert conditions
4. Least populous state in India
(A) P-2, Q-4, R-3, S-1
(B) P-1, Q-4, R-2, S-3
(C) P-2, Q-3, R-4, S-1
(D) P-4, Q-2, R-1, S-3

35. Select the correct order of the following states based on their overall sex ratio (2011 Census) from highest to lowest.
(A) Kerala > Tamil Nadu > Andhra Pradesh > Haryana
(B) Tamil Nadu > Kerala > Haryana > Andhra Pradesh
(C) Kerala > Andhra Pradesh > Tamil Nadu > Haryana
(D) Haryana > Andhra Pradesh > Tamil Nadu > Kerala

36. Population density is conventionally calculated using which of the following formulas?
(A) Total Population divided by Total Land Area
(B) Total Population divided by Total Arable Land
(C) Total Agricultural Population divided by Net Cultivated Area
(D) Total Urban Population divided by Total Rural Population

NODIA

CHAPTER 08

Population Geography : Growth, Distribution and Migration

1. The year 1921 is known as the demographic divide in India's demographic history. What is the reason for this?
(A) It marked the beginning of family planning programs.
(B) It recorded the highest decadal growth rate in Indian history.
(C) It marked the transition of India into the final stage of demographic transition.
(D) It was the only census year that recorded a negative population growth rate.

2. Infant Mortality Rate (IMR) is defined as the number of deaths of infants under the age of one year per how many live births in a given year?
(A) 100
(B) 1,000
(C) 10,000
(D) 100,000

3. Read the following statements and select the correct answer from the given options:
Statement I: India's population represents over 17 percent of the total world population.
Statement II: India occupies roughly 2.4 percent of the world's total land area.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

4. An increase in life expectancy at birth in India is a direct effect of which of the following?
(A) Rise in per capita income and decline in agricultural dependence
(B) High levels of rural to urban migration
(C) Improved public health, immunization, and control of epidemics
(D) Implementation of stricter family planning norms

5. From 1981 onwards, the population growth rate in India started declining gradually. What is the primary cause of this trend?
(A) An increase in the death rate.
(B) A downward trend in the crude birth rate.
(C) Massive out-migration of Indians to Western countries.
(D) An increase in the infant mortality rate.

6. Which of the following is not a consequence of population explosion in India?
(A) Increased pressure on land and fragmentation of landholdings
(B) Automatic eradication of absolute poverty
(C) High rate of unemployment and underemployment
(D) Extreme pressure on civic amenities and infrastructure

7. Which demographic milestone did India reach in 2023 regarding its global population standing?
(A) It became the country with the highest proportion of elderly population.
(B) It officially surpassed China to become the most populous country in the world.
(C) It achieved the global replacement level fertility rate across all states.
(D) It recorded a negative population growth rate for the first time.

8. In demography, what is the widely accepted replacement level Total Fertility Rate (TFR)?
(A) 1.5
(B) 2.1
(C) 2.5
(D) 3.0

Downloaded from www.pdf.tube

47. The Chhota Nagpur Plateau region has a moderate to high population concentration primarily due to which factor?
(A) Extensive agricultural plains
(B) Mining and associated industrial development
(C) High rainfall and fertile alluvial soil
(D) Proximity to the sea coast

48. Match the items in List I with their descriptions in List II and select the correct answer from the options given below.
List I: (Metric)
P. Elderly Dependency Ratio
Q. Youth Dependency Ratio
R. Total Dependency Ratio
S. Demographic Dividend
List II: (Description)
1. Ratio of 0-14 years population to working-age population
2. Economic growth potential due to a high working-age population
3. Ratio of 60+ years population to working-age population
4. Combined ratio of children and elderly to working-age population
(A) P-3, Q-1, R-4, S-2
(B) P-1, Q-3, R-2, S-4
(C) P-4, Q-2, R-1, S-3
(D) P-3, Q-4, R-1, S-2

49. In Madhya Pradesh, which district recorded the highest literacy rate according to the 2011 Census?
(A) Jabalpur
(B) Indore
(C) Bhopal
(D) Gwalior

50. Consider the following statements about the causes of a skewed sex ratio in India:
I. Strong son preference due to socio-cultural reasons.
II. Practice of female foeticide.
III. Higher natural biological mortality of female infants compared to males.
IV. Dowry system placing a financial burden on parents of girls.
Which of the above statement(s) is/are correct?
(A) I, II, and III only
(B) I, II, and IV only
(C) II, III, and IV only
(D) I, III, and IV only

51. Physiological density of a population is a more realistic measure of pressure on land. How is it calculated?
(A) Total Population divided by Total Land Area
(B) Total Agricultural Population divided by Net Cultivable Area
(C) Rural Population divided by Total Forest Area
(D) Total Population divided by Net Cultivated Area

52. Which age group is conventionally considered the working-age population in India for calculating the dependency ratio?
(A) 0 to 14 years
(B) 15 to 59 years
(C) 18 to 65 years
(D) 21 to 60 years

53. The Child Sex Ratio in India is calculated as the number of females per thousand males in which age group?
(A) 0 to 1 years
(B) 0 to 4 years
(C) 0 to 6 years
(D) 0 to 14 years

54. Which of the following is an economic factor that leads to a high concentration of population in a specific region?
(A) Favorable climate
(B) Flat topography
(C) Availability of mineral resources and industrialization
(D) High natural fertility of the soil

55. Which of the following is NOT a consequence of a severely skewed sex ratio favoring males?
(A) Automatic increase in female empowerment
(B) Demographic imbalance and potential social unrest
(C) Increase in crimes against women
(D) Difficulties in finding marriage partners for men

56. The age structure of a population is visually represented by a population pyramid. What

NOIDIA

does a pyramid with a wide base and narrow top indicate?
(A) A high proportion of young population and high fertility rates
(B) A declining population with low birth rates
(C) A high proportion of elderly dependents
(D) A stable population with zero growth rate

57. Which three states collectively constitute roughly one-third of India's total population?
(A) Uttar Pradesh, Maharashtra, Bihar
(B) Uttar Pradesh, Madhya Pradesh, Rajasthan
(C) Bihar, West Bengal, Odisha
(D) Maharashtra, Tamil Nadu, Karnataka

58. According to the 2011 Census, what was the overall sex ratio of India?
(A) 927 females per 1000 males
(B) 933 females per 1000 males
(C) 940 females per 1000 males
(D) 943 females per 1000 males

59. The population distribution in India is highly uneven. Which region hosts the largest concentration of India's population?
(A) The Peninsular Plateau
(B) The Himalayan Region
(C) The Northern Plains
(D) The Coastal Plains

60. The scheme 'Beti Bachao Beti Padhao' was primarily launched to address which of the following demographic issues?
(A) High maternal mortality rate
(B) Declining child sex ratio
(C) Low female workforce participation
(D) Nutritional deficiencies in adolescent girls

61. According to the Census classification of towns based on population size, a Class I town or city must have a minimum population of:
(A) 10,000
(B) 50,000
(C) 100,000
(D) 1,000,000

62. The dominant stream of male migration in India is:
(A) Rural to Urban
(B) Rural to Rural
(C) Urban to Rural
(D) Urban to Urban

63. Which union territory has the highest population density in India?
(A) NCT of Delhi
(B) Chandigarh
(C) Puducherry
(D) Lakshadweep

64. Tribal migration in Central India, including Madhya Pradesh, is frequently driven by displacement. What is the most common cause of this displacement?
(A) Voluntary relocation to metropolitan cities for IT jobs
(B) International brain drain of highly skilled workers
(C) Large projects like dams, mines, and sanctuaries
(D) Religious pilgrimages across various sacred sites

65. The Smart Cities Mission in India primarily aims to:
(A) Boost growth by using technology for local development.
(B) Provide universal housing at zero cost for rural migrants.
(C) Convert all small towns into million-plus urban centers.
(D) Relocate established industrial units into agricultural areas.

66. Match the items in List I with their dominant characteristics in List II and select the correct answer from the options given below.
List I: (Migration Stream)
P. Rural to Rural
Q. Rural to Urban
R. Urban to Urban
S. Urban to Rural
List II: (Characteristic)
1. Mostly return migration or retirement relocation
2. Driven by better employment and education pull factors
3. Heavily dominated by female marriage migration
4. Migration of professionals seeking better corporate opportunities
(A) P-3, Q-2, R-4, S-1

Click Here to Buy book on Amazon

(B) P-2, Q-3, R-1, S-4
(C) P-3, Q-4, R-2, S-1
(D) P-1, Q-2, R-4, S-3

67. Identify the odd one out among the following states regarding population density (as per 2011 Census).
(A) Arunachal Pradesh
(B) Mizoram
(C) Bihar
(D) Sikkim

68. In India, rural to urban migration is heavily influenced by 'Push' factors. Which of the following is a primary push factor?
(A) Superior education facilities in villages
(B) Poverty and unemployment in rural areas
(C) High demand for local agricultural labor
(D) Modern entertainment in metropolitan cities

69. Which state is a major recipient (destination) of inter-state migrants in India due to industrialization and urbanization?
(A) Maharashtra
(B) Odisha
(C) Jharkhand
(D) Assam

70. A city with a population of one million (10 lakh) or more is termed a million-plus city. How many million-plus cities (urban agglomerations) were there in India as per the 2011 Census?
(A) 35
(B) 42
(C) 53
(D) 65

71. The target year for achieving a stable population under NPP 2000 was later revised. What is the current target year?
(A) 2050
(B) 2070
(C) 2085
(D) 2100

72. The Census of India classifies a settlement as a 'Census Town' if it fulfills certain criteria. Which of the following is NOT one of those criteria?
(A) A minimum population of 5,000
(B) The presence of a municipality, corporation, or cantonment board
(C) At least 75 percent of the male main working population engaged in non-agricultural pursuits
(D) A density of population of at least 400 persons per sq. km

73. In the stream of rural-to-rural migration in India, which demographic group predominantly dominates?
(A) Females migrating primarily due to marriage
(B) Males migrating for agricultural labor
(C) Students migrating for higher education
(D) Elderly migrating for retirement

74. Which of the following is a fundamental component of the Smart Cities Mission?
(A) Reaching a zero-carbon footprint across all cities.
(B) Eliminating all rural villages near urban zones.
(C) Applying smart solutions to city-wide infrastructure.
(D) Banning all private vehicles within urban spaces.

75. What was the immediate objective of the National Population Policy (NPP) 2000?
(A) To achieve a stable population by 2045
(B) To bring the Total Fertility Rate to replacement level by 2010
(C) To enforce a strict two-child norm with legal penalties
(D) To address unmet needs for health infrastructure

76. Arrange the following states in descending order of their population density (highest to lowest) according to the 2011 Census.
1. West Bengal
2. Bihar
3. Uttar Pradesh
4. Kerala

Select the correct sequence from the options below:
(A) 2, 1, 4, 3
(B) 1, 2, 3, 4
(C) 2, 4, 1, 3
(D) 3, 1, 2, 4

Downloaded from www.pdf.tube

37. India is currently considered to be in which stage of the Demographic Transition?
(A) High stationary stage with stagnant population expansion.
(B) Expanding growth phase occurring in the early transition.
(C) Late second or early third stage of declining fertility.
(D) Low stationary stage characterized by zero population growth.

38. What does the PC-PNDT Act, enacted in 1994, explicitly prohibit?
(A) Child marriage
(B) Dowry transactions
(C) Employment of children in hazardous industries
(D) Pre-conception and pre-natal sex determination

39. Which physiographic factor is primarily responsible for the sparse population in the state of Arunachal Pradesh?
(A) High incidence of seasonal monsoon floods.
(B) Presence of dense tropical evergreen forests.
(C) Extreme aridity causing severe desertification.
(D) Rugged mountainous terrain and harsh climate.

40. In the context of India's age structure, what demographic trend is projected for the state of Kerala in the near future compared to Uttar Pradesh?
(A) Kerala will have a higher youth dependency ratio.
(B) Uttar Pradesh will have a higher elderly dependency ratio.
(C) Both states will exhibit identical age structures.
(D) Kerala will experience a faster transition to an aging population.

41. How is Agricultural Density defined in population geography?
(A) Total Population / Net Cultivated Area
(B) Total Agricultural Population / Net Cultivable Area
(C) Total Rural Population / Total Land Area
(D) Total Farmers / Total Urban Population

42. Over the last few decades, the base of India's population pyramid has started to narrow. What is the primary reason for this change?
(A) Increase in infant mortality
(B) Massive emigration of young people
(C) Decline in total fertility rate
(D) Increase in life expectancy

43. Consider the following statements about literacy in India:
I. A person aged 7 years and above who can read and write with understanding in any language is considered literate.
II. The 2011 Census recorded an overall literacy rate of 74.04 percent.
III. The female literacy rate surpassed the male literacy rate in 2011.
IV. Kerala has the highest literacy rate among Indian states.
V. Bihar has the lowest literacy rate among Indian states.
Which of the above statement(s) is/are correct?
(A) I, II, IV, and V only
(B) I, III, IV, and V only
(C) II, III, IV, and V only
(D) I, II, III, and IV only

44. Which of the following states recorded the lowest Child Sex Ratio (0-6 years) in the 2011 Census?
(A) Punjab
(B) Rajasthan
(C) Uttar Pradesh
(D) Haryana

45. According to the 2011 Census, which state has the highest population density in India?
(A) West Bengal
(B) Uttar Pradesh
(C) Bihar
(D) Kerala

46. The term demographic window of opportunity for India is projected to last approximately until which decade, before the society starts rapidly aging?
(A) 2030s
(B) 2050s
(C) 2070s
(D) 2090s

NODIA

(B) Scheduled Tribes and rural agriculturalists
(C) Wealthy plantation owners
(D) Coastal fishermen

88. Mega cities are generally defined as having a population exceeding:
(A) 1 million
(B) 5 million
(C) 10 million
(D) 20 million

89. Which pair correctly identifies the major out-migrating states (source regions) in India?
(A) Maharashtra and Gujarat
(B) Uttar Pradesh and Bihar
(C) Kerala and Tamil Nadu
(D) Punjab and Haryana

90. Migration in India is calculated based on two main criteria in the Census. What are they?
(A) Place of birth and Place of last residence
(B) Mother tongue and Religion
(C) Occupation and Educational attainment
(D) Age and Marital status

91. Which of the following is NOT an objective of the Tribal Sub-Plan (TSP) strategy in India?
(A) Socio-economic development of STs
(B) Protection of STs against exploitation
(C) Forced assimilation into urban culture
(D) Bridging the gap in literacy and health

92. Brain Drain is a form of migration that predominantly affects which sector of a developing nation's demography?
(A) Unskilled agricultural labor
(B) Retired elderly population
(C) Educated and skilled professionals
(D) Nomadic herders

93. Consider the following statements regarding the Scheduled Caste (SC) population in India:
I. They constitute about 16.6 percent of the total population.
II. Punjab has the highest percentage of SCs to its state population.
III. Nagaland and Lakshadweep have no notified SC population.
IV. Uttar Pradesh has the largest absolute number of SC population.
Which of the above statements is incorrect?
(A) I and II
(B) III and IV
(C) None of the statements are incorrect
(D) I, II, and III are incorrect

94. Consider the following statements about urban settlements:
I. Statutory towns have a civic administration body.
II. Census towns meet specific demographic and occupational criteria.
III. Outgrowths are viable urban entities adjacent to a statutory town.
IV. Urban Agglomerations must consist of at least one statutory town and its adjoining outgrowths.
V. All Indian villages with over 5,000 population are automatically census towns.
Which of the above statement(s) is/are correct?
(A) I, II, III, and IV only
(B) I, II, IV, and V only
(C) II, III, IV, and V only
(D) I, III, IV, and V only

95. Dravidian languages are predominantly spoken in which region of India?
(A) Northern India
(B) Southern India
(C) North-Eastern India
(D) Western India

96. Which scheme promotes the birth of the girl child and provides financial assistance for her education in Madhya Pradesh?
(A) Kanya Vivah Yojana
(B) Ladli Laxmi Yojana
(C) Matru Vandana Yojana
(D) Tejaswini Yojana

97. India was the first country in the world to launch a national programme for family planning. In which year was it launched?
(A) 1947
(B) 1952
(C) 1971
(D) 2000

98. In Madhya Pradesh, the phenomenon of seasonal migration of Bhil tribes for wage labor is largely directed towards which neighboring state?

Click Here to Buy book on Amazon

(A) High human development index and low fertility
(B) Highest degree of urbanization
(C) 100 percent literacy rates
(D) High infant mortality rates and high total fertility rates

123. The Indian census counts homeless individuals and nomadic tribes under which category?
(A) Household Population
(B) Institutional Population
(C) Houseless Population
(D) Uncounted Demographics

124. In which year was the Medical Termination of Pregnancy (MTP) Act originally passed in India, impacting demographic health policies?
(A) 1952
(B) 1971
(C) 1994
(D) 2000

125. The phenomenon where the working-age population is forced to migrate due to a lack of local opportunities, leaving behind women, children, and the elderly, results in the 'feminization' of which sector?
(A) Information Technology
(B) Mining
(C) Agriculture
(D) Urban Transport

126. Arrange the following stages of India's population growth chronologically:
1. Period of rapid high growth
2. Period of high declining growth
3. Period of stagnant growth
4. Period of steady growth

Select the correct sequence from the options below:
(A) 3, 4, 1, 2
(B) 1, 2, 3, 4
(C) 4, 3, 2, 1
(D) 3, 1, 4, 2

127. The concept of 'Carrying Capacity' of a region is most closely related to which of the following?
(A) The number of migrants a city's transport system can handle
(B) The population size an environment can sustain
(C) The total capacity of hospitals in an urban agglomeration
(D) The maximum birth rate biologically possible

128. What does the term 'Morbidity' indicate in population studies?
(A) The study of death rates
(B) The psychological impact of migration
(C) The statistical tracking of marriages
(D) The state of being unhealthy or diseased

129. Which of the following states is NOT considered an Empowered Action Group (EAG) state in demographic terms?
(A) Bihar
(B) Kerala
(C) Uttar Pradesh
(D) Madhya Pradesh

130. The 'Janani Shishu Suraksha Karyakram' (JSSK) provides which of the following benefits to pregnant women in public health institutions?
(A) Free and cashless deliveries and surgeries.
(B) Permanent housing facilities post-delivery.
(C) Cash rewards specifically for male infants.
(D) Statutory jobs for the head of the family.

NODIA

110. According to the Demographic Transition Theory, the phenomenon of 'population aging' primarily occurs in which stage?
(A) First stage
(B) Second stage
(C) Third stage
(D) Fourth stage

111. Which demographic term is used when educated, middle-class populations move from city centers to surrounding rural or suburban fringes?
(A) Counter-urbanization
(B) Urbanization
(C) Ruralization
(D) Slumification

112. In terms of percentage of the total state population, which of the following states/UTs has the highest proportion of Scheduled Tribes?
(A) Madhya Pradesh
(B) Both Mizoram and Lakshadweep
(C) Mizoram
(D) Lakshadweep

113. Which linguistic family accounts for the largest proportion of spoken languages in India?
(A) Dravidian
(B) Austro-Asiatic
(C) Indo-European (Indo-Aryan)
(D) Sino-Tibetan

114. Under the Smart Cities Mission, what does 'Retrofitting' mean?
(A) Building a completely new city on vacant land
(B) Developing an existing area for smart goals
(C) Converting rural villages into census towns
(D) Demolishing all existing structures to build skyscrapers

115. Which demographic indicator is best suited to assess the current healthcare facilities available for newborn infants?
(A) Crude Death Rate
(B) Maternal Mortality Rate
(C) Total Fertility Rate
(D) Neo-natal Mortality Rate

116. The Scheduled Tribe (ST) population constitutes what percentage of India's total population (as per 2011 Census)?
(A) 8.6 percent
(B) 12.4 percent
(C) 16.6 percent
(D) 21.2 percent

117. Which region of Madhya Pradesh exhibits the highest population density due to industrial development and fertile land?
(A) Baghelkhand Plateau
(B) Satpura-Maikal Range
(C) Narmada-Son Valley
(D) Malwa Plateau

118. Select the correct sequence of religious communities in India arranged in descending order of their population size (2011 Census).
(A) Hindus, Muslims, Christians, Sikhs, Buddhists, Jains
(B) Hindus, Muslims, Sikhs, Christians, Jains, Buddhists
(C) Hindus, Christians, Muslims, Sikhs, Buddhists, Jains
(D) Hindus, Muslims, Christians, Buddhists, Sikhs, Jains

119. Which factor has historically NOT been a major cause for internal migration in India?
(A) Religious persecution
(B) Marriage
(C) Employment
(D) Education

120. Austro-Asiatic (Nishada) languages are mainly spoken by:
(A) Tribal groups in Central and Eastern India.
(B) Urban populations in metropolitan cities.
(C) Inhabitants within the Kashmir valley area.
(D) Coastal communities residing in Kerala.

121. Which demographic indicator is inversely related to the literacy rate of women in India?
(A) Total Fertility Rate
(B) Life expectancy
(C) Age at marriage
(D) Female workforce participation

122. The 'EAG States' (Empowered Action Group States) in India are primarily characterized by:

Downloaded from www.pdf.tube

projected to remain open until approximately the 2050s. After this point, the aging of the current youth bulge will lead to a rapid increase in the elderly population. This timeframe provides a limited period for the nation to accelerate economic growth.

47. (B) Mining and associated industrial development
Although the Chhota Nagpur Plateau has rugged terrain, it supports a significant population because of its immense mineral wealth. The region is rich in coal, iron ore, and other minerals, which has led to the development of mining and heavy industries. These economic activities create jobs and attract migrants, resulting in higher population concentrations than expected based on topography alone.

48. (A) P-3, Q-1, R-4, S-2
Dependency ratios categorize the non-working population into youth and elderly segments relative to those in the labor force. The total dependency ratio combines both groups to show the overall burden on workers. The demographic dividend represents the potential economic gain when the working-age cohort is large. Understanding these ratios is essential for planning social security and healthcare services.

49. (A) Jabalpur
In the state of Madhya Pradesh, Jabalpur recorded the highest literacy rate according to the 2011 Census findings. Jabalpur has long been an educational hub, which has contributed to its superior literacy levels compared to other major cities like Indore or Bhopal. The presence of numerous educational institutions and high urban awareness has maintained its leading position in the state.

50. (B) I, II, and IV only
The imbalanced sex ratio in the country is primarily caused by social and cultural factors rather than biological ones. Strong preferences for male children, the practice of illegal female foeticide, and the economic burden of the dowry system all contribute to the deficit of females. Biologically, female infants are actually more resilient than males, so natural ratios favor female survival.

51. (D) Total Population divided by Net Cultivated Area
Physiological density is a refined measure of population pressure that considers only the land actually used for food production. It is calculated by dividing the total population of a region by the net area of land under cultivation. This ratio is particularly useful in agricultural societies because it reveals the true intensity of human demand on the productive available farmland.

52. (B) 15 to 59 years
For demographic and statistical purposes in India, the working-age population is conventionally defined as those between the ages of fifteen and fifty-nine. Individuals in this group are considered potentially active participants in the labor force. Those younger than fifteen or aged sixty and older are classified as dependents, as they are generally not expected to be primary earners.

53. (C) 0 to 6 years
The Child Sex Ratio is a specific demographic indicator that focuses on the youngest segment of the population. It is defined as the number of females per one thousand males within the age group of zero to six years. This metric is a sensitive indicator of gender discrimination and allows demographers to identify regions where sex-selective practices may be occurring.

54. (C) Availability of mineral resources and industrialization
While physical factors like climate and soil are important, economic factors often drive intense population concentration. Areas rich in minerals attract mining companies and manufacturing plants, which in turn create a high demand for labor. This industrialization provides diverse employment opportunities and supporting services, leading to the growth of urban centers and a dense concentration of residents in industrial belts.

NODIA

55. (A) Automatic increase in female empowerment
A severely skewed sex ratio favoring males leads to numerous social problems, including increased crimes against women and difficulty for men in finding marriage partners. It creates a demographic imbalance that can lead to long-term social instability. Contrary to increasing

ANSWERS

1. (D) It was the only census year that recorded a negative population growth rate.
The year 1921 is recognized as the Great Divide because it marks the only instance in India's history where the population growth rate became negative. Prior to this, population growth was stagnant and inconsistent. High mortality due to famine and epidemics like the influenza pandemic caused this decline, after which the population began growing steadily and consistently.

2. (B) 1,000
Infant Mortality Rate is a crucial indicator of a country's health status and socioeconomic development. It specifically measures the number of infant deaths before reaching the first year of life for every one thousand live births in a specific geographic area within a calendar year. This metric allows for standardized comparisons of child survival across different regions and time.

3. (C) Both Statement I and Statement II are correct.
India possesses a unique demographic profile characterized by a massive population density. According to global statistics, India occupies only about two point four percent of the world's total geographical land area while supporting more than seventeen percent of the total global population. This disparity creates significant pressure on natural resources, food security, and infrastructure within the country's sovereign geographical boundaries.

4. (C) Improved public health, immunization, and control of epidemics
The rise in average life expectancy across the country is primarily driven by significant advancements in medical science and public health infrastructure. Enhanced access to vaccines, the successful eradication of infectious diseases, and better management of nutrition have reduced mortality rates. These systematic improvements ensure that individuals survive common ailments and live longer, healthier lives than previous generations of citizens.

5. (B) A downward trend in the crude birth rate.
India's population growth rate began a gradual descent after 1981, marking a shift in the demographic transition. This trend is largely attributed to the effective implementation of family planning measures and increased awareness regarding reproductive health. As education levels rose and socioeconomic conditions improved, the crude birth rate dropped, slowing down the overall pace of total population expansion.

6. (B) Automatic eradication of absolute poverty
Rapid population growth creates intense pressure on resources, often leading to unemployment, land fragmentation, and overburdened infrastructure. While economic growth may occur, the sheer volume of people usually makes the eradication of poverty more challenging rather than automatic. Instead of solving poverty, a population explosion often exacerbates wealth inequality and stretches social welfare systems beyond their intended operational capacity.

7. (B) It officially surpassed China to become the most populous country in the world.
In early 2023, data from international demographic organizations indicated that India had overtaken China to become the world's most populous nation. This milestone reflects decades of population momentum despite declining fertility rates. This shift carries significant geopolitical and economic implications, as India now manages the largest human resource pool and faces the challenge of providing for its massive population.

8. (B) 2.1
Replacement level fertility is the specific fertility rate at which a population exactly replaces itself from one generation to the next without migration. Globally, this value is set at approximately two point one children per woman. This slight margin above two accounts for the possibility of infant mortality and ensures the long-term stabilization of a nation's total population size.

Click Here to Buy book on Amazon

the natural resilience of the female biology often lead to a longer average lifespan.

28. (A) Both birth rate and death rate were exceptionally high.
The period from 1901 to 1921 is characterized by a stagnant population because high birth rates were cancelled out by equally high death rates. Factors such as poor medical facilities, lack of sanitation, and widespread epidemics like the plague and influenza kept mortality high. Additionally, recurring famines during the early twentieth century contributed to the high death rate.

29. (C) Kerala
Kerala is renowned for its exceptional performance in social indicators, particularly health and education. It consistently records the lowest infant mortality rate in the country, with figures that are comparable to many developed nations. This success is the result of long-term investments in primary healthcare, high levels of female literacy, and a robust decentralized healthcare delivery system.

30. (D) Infant Mortality Rate - Number of maternal deaths per 100,000 live births.
Demographic terms are defined by specific parameters. The crude birth and death rates are measured per thousand people, while replacement level fertility refers to population stabilization. However, the Infant Mortality Rate is defined as the number of infant deaths per one thousand live births. The definition involving maternal deaths per one hundred thousand live births refers to the Maternal Mortality Ratio.

31. (C) (Population aged 0-14 + Population aged 60+) / (Population aged 15-59)
The dependency ratio measures the pressure on the productive part of the population. It is calculated by taking the sum of those typically not in the labor force, including children under fifteen and the elderly aged sixty and above, and dividing it by the working-age population. This ratio indicates how many dependents each hundred workers must support through their economic activity.

32. (B) It narrowed down.
Between the 2001 and 2011 censuses, there was a positive trend in Indian education as the gap between male and female literacy rates narrowed. While male literacy continued to grow, female literacy increased at a faster rate during this decade. This change reflects successful government initiatives to promote girl-child education and a general societal shift toward valuing literacy for all.

33. (D) A is false but R is true.
A large working-age population does not automatically guarantee economic growth. While it is true that more workers can increase consumption and boost GDP, this dividend can only be realized if the population is healthy and skilled. Without proper policy interventions in education, healthcare, and job creation, a large youth population could lead to unemployment rather than economic prosperity.

34. (A) P-3, Q-2, R-1, S-4
India's states have varied demographic characteristics. Uttar Pradesh is the most populous state, while Sikkim has the smallest total population. Rajasthan features low density because of its vast desert areas, which limit human settlement. Maharashtra, however, has high population concentrations centered around major industrial and urban hubs like Mumbai, reflecting the impact of urbanization and economic opportunities.

NODIA

35. (A) Kerala > Tamil Nadu > Andhra Pradesh > Haryana
According to the 2011 Census, Kerala has the highest sex ratio in the country, being the only state where females outnumber males. It is followed by other southern states like Tamil Nadu and Andhra Pradesh, which also maintain relatively healthy sex ratios. In contrast, northern states like Haryana have historically recorded some of the lowest sex ratios due to biases.

36. (A) Total Population divided by Total Land Area
Population density is a simple mathematical ratio used to express the concentration of people in a given territory. It is calculated by dividing the total population of a region by its total land area, usually expressed in square kilometers. This measurement provides a general idea of the

growth. The decadal growth rate was recorded at seventeen point sixty-four percent, which was a notable decline from the previous decade's growth of over twenty-one percent. This reduction reflects the impact of population control policies, rising urbanization, and increasing literacy rates across various population segments.

19. (D) Janani Suraksha Yojana
Janani Suraksha Yojana is a safe motherhood intervention under the National Health Mission. Its primary goal is to reduce maternal and neonatal mortality by encouraging institutional deliveries among poor pregnant women. The scheme provides a cash incentive to mothers who give birth in government health facilities, ensuring they receive professional medical care during the critical period of labor.

20. (A) P-3, Q-2, R-1, S-4
Demographic metrics help in understanding population dynamics through specific definitions. The birth rate counts live births per thousand people annually, while the natural growth rate is the difference between births and deaths. Total fertility rate estimates the average children per woman, and life expectancy predicts the average years of survival. These indicators combined provide a comprehensive view of a nation's growth.

21. (C) High birth rate and high death rate
The first stage of demographic transition, often called the high stationary stage, is characterized by both high birth and death rates. In this phase, people have many children to offset the high mortality caused by poor sanitation and lack of medicine. Consequently, the total population grows very slowly or remains stagnant because the births and deaths largely balance out.

22. (B) The Census Act, 1948
The Census of India is a statutory exercise conducted under the provisions of the Census Act of 1948. This legislation provides the legal framework for the collection of data and ensures the confidentiality of the information provided by citizens. It empowers the central government to take the census and mandates that all individuals provide truthful information to appointed officers.

23. (D) Nagaland
Nagaland was the only state in the country to record a negative decadal population growth rate during the 2011 Census. While the rest of the nation saw an increase in population, Nagaland reported a decline of approximately zero point fifty-eight percent. This unusual trend is often attributed to the correction of inflated data from previous censuses and significant migration.

24. (D) Substantial increase in institutional deliveries
The sharp decline in maternal mortality is closely linked to the transition from home-based deliveries to institutional deliveries in hospitals and clinics. When births occur in medical facilities, complications can be managed by trained professionals using sterile equipment and emergency procedures. Government incentives and improved rural health infrastructure have made these services accessible to a larger portion of the pregnant population.

25. (B) Inherent population momentum among large cohorts of reproductive age.
Population momentum is a phenomenon where a population continues to grow even after fertility rates have dropped to replacement level. This occurs because previous periods of high fertility have created a very large number of young people who are now entering their reproductive years. Even if each couple has fewer children, the sheer number of couples results in more births.

NODIA

26. (B) 1881
While the first non-synchronous census was attempted in 1872, the first complete and synchronous census of India was conducted in 1881. This census was carried out simultaneously across the entire country, providing a more accurate and comprehensive snapshot of the demographic profile. Since then, the census has been conducted every ten years without fail until the recent 2021 disruption.

27. (A) Females
In India, as in most parts of the world, females generally exhibit a higher life expectancy at birth compared to males. This gap is attributed to both biological advantages and behavioral differences. While women face specific health risks related to childbirth, improvements in maternal care and

9. (B) II and III only
Maternal Mortality reflects the risk associated with pregnancy and childbirth. It is defined as maternal deaths during pregnancy or within forty-two days of termination. Unlike many other rates, the Maternal Mortality Ratio is typically measured per one hundred thousand live births. Certain states, such as Assam, have historically reported higher ratios compared to the national average due to healthcare access.

10. (C) Period of rapid growth or explosion
The three decades between 1951 and 1981 are described as the period of population explosion in the nation. During this time, the death rate plummeted significantly due to improved healthcare and sanitation, while birth rates remained high. This imbalance led to an unprecedented increase in the total population, with growth rates exceeding two percent per annum throughout the period.

11. (B) Second stage
In the second stage of the Demographic Transition Theory, societies experience a rapid population increase known as an explosion. This occurs because improvements in medicine and hygiene cause a sharp decline in the mortality rate. However, the birth rate remains high due to social and cultural inertia. The resulting wide gap between births and deaths generates extremely high growth.

12. (C) The census methodology relies exclusively on online voluntary submissions.
The Census of India is a massive administrative undertaking conducted decennially by the Office of the Registrar General. It relies on a door-to-door enumeration process where trained officials visit every household to collect data. While digital tools are being introduced, the methodology is comprehensive and mandatory rather than relying solely on voluntary online submissions from the general public.

13. (A) Bihar
Data from the fifth National Family Health Survey indicates that while most states have reached or are approaching replacement level fertility, Bihar remains an outlier with a significantly higher Total Fertility Rate. Factors such as lower female literacy, early marriage, and limited access to contraceptive services contribute to this trend. This high fertility rate continues to drive substantial population growth.

14. (C) Crude birth rate and crude death rate
The natural growth rate of a population represents the difference between the number of live births and the number of deaths occurring in a year. It is calculated by subtracting the crude death rate from the crude birth rate. This figure excludes the effects of migration and focuses solely on the biological expansion or contraction of the population residing in a area.

15. (A) Statement I is correct and Statement II is incorrect.
Madhya Pradesh has historically reported some of the highest infant mortality rates in the country, often exceeding the national average. However, government efforts to improve neonatal care units in district hospitals have significantly impacted these figures. Contrary to the idea of having no impact, these medical interventions and specialized care for newborns have been vital in reducing mortality rates.

16. (A) A higher proportion of the working-age population relative to dependents.
A demographic dividend occurs during a specific phase of a country's transition where the proportion of people in the working-age bracket is larger than the proportion of children and elderly dependents. This shift provides a window of economic opportunity, as there are more potential producers than consumers. To realize this benefit, the workforce must be properly educated and skilled.

17. (C) 100,000 live births
The Maternal Mortality Ratio is a standard international health indicator. It is calculated by taking the number of maternal deaths and dividing it by the total number of live births occurring in the same period, then multiplying by one hundred thousand. Using this large denominator allows for more accurate tracking of these events, which are less frequent than infant deaths.

18. (A) 17.64 percent
Between the 2001 and 2011 censuses, India experienced a significant slowing in its population

Downloaded from www.pdf.tube

average human pressure on the land and varies significantly across different geographical zones.

37. (C) Late second or early third stage of declining fertility.
India is currently transitioning through the later stages of the demographic transition model. While the death rate has already fallen significantly, the birth rate is now also in a steady state of decline across most regions. This indicates a shift from the rapid expansion of the second stage to the maturing phase of the third stage of transition.

38. (D) Pre-conception and pre-natal sex determination
The Pre-conception and Pre-natal Diagnostic Techniques Act was enacted in 1994 to combat the declining child sex ratio caused by female foeticide. The law prohibits the use of medical technology to determine the sex of a fetus before birth. By banning sex selection, the government aims to stop the targeted elimination of female fetuses and promote gender equality.

39. (D) Rugged mountainous terrain and harsh climate.
Arunachal Pradesh has one of the lowest population densities in India due to its challenging physical environment. The state is dominated by the steep, rugged mountains of the eastern Himalayas and is covered by dense forests. These geographic features, combined with a harsh climate and difficult accessibility, limit the availability of land for agriculture, leading to a sparse population.

40. (D) Kerala will experience a faster transition to an aging population.
Kerala has completed its demographic transition much earlier than states like Uttar Pradesh. Due to its long history of low fertility and high life expectancy, Kerala is now seeing a significant increase in the proportion of elderly citizens. This means Kerala will face the challenges of an aging society, such as increased healthcare needs, much sooner than the northern states.

41. (B) Total Agricultural Population / Net Cultivable Area
Agricultural density provides a more specific measure of how a rural population relates to the land. It is calculated by dividing the total number of people who depend on farming for their livelihood by the total area of land that can actually be cultivated. This metric helps in understanding the level of economic pressure within the agricultural sector of a country.

42. (C) Decline in total fertility rate
A population pyramid represents the age and sex distribution of a country. When the base of the pyramid narrows, it indicates that the number of children being born is decreasing. This shift in India is a direct result of the declining total fertility rate, as families choose to have fewer children. Over time, this leads to an aging population structure.

43. (A) I, II, IV, and V only
The Census defines a literate person as someone aged seven or above who can read and write with understanding. While overall literacy reached seventy-four percent in 2011, female literacy still lagged behind male literacy. Kerala and Bihar represent the two extremes of the literacy spectrum. These regional variations highlight the disparate levels of educational development and access across states.

NODIA

44. (D) Haryana
The Child Sex Ratio measures the number of girls for every thousand boys in the age group of zero to six years. In the 2011 Census, Haryana recorded the lowest child sex ratio in India. This alarming trend in a relatively wealthy state is often linked to the misuse of medical technology for sex-selective practices and a persistent preference for male children.

45. (C) Bihar
According to the 2011 Census data, Bihar has surpassed West Bengal to become the state with the highest population density in the country. With over eleven hundred people per square kilometer, Bihar experiences immense pressure on its land resources. This high density is a result of a large total population living within a relatively small geographical area with high fertility.

46. (B) 2050s
India is currently in a favorable demographic phase where its working-age population is expanding. This window of opportunity is

(A) Gujarat
(B) Uttar Pradesh
(C) Chhattisgarh
(D) Bihar

99. The urban agglomerations of Delhi, Mumbai, and Kolkata suffer from urban sprawl and slum proliferation. This is a manifestation of:
(A) Counter-urbanization
(B) Over-urbanization
(C) Suburbanization
(D) De-urbanization

100. The Christian population in India is relatively highly concentrated in which of the following regions?
(A) North-Western states of Punjab and Haryana
(B) The Ganges plain of Uttar Pradesh and Bihar
(C) North-Eastern states and the Western coast
(D) Arid regions of Rajasthan and Gujarat state

101. A 'primate city' in population geography refers to:
(A) A city exclusively inhabited by tribal populations
(B) A newly planned greenfield smart city
(C) A city experiencing negative population growth
(D) A city disproportionately larger than others

102. Which Indian state has the highest absolute number of Scheduled Tribe (ST) population?
(A) Madhya Pradesh
(B) Maharashtra
(C) Odisha
(D) Chhattisgarh

103. The term 'Ghost Villages' in Uttarakhand is a direct consequence of which demographic process?
(A) High infant mortality
(B) Massive youth out-migration for jobs
(C) Epidemics wiping out populations
(D) Forced tribal displacement

104. Which is the most spoken language in India, acting as a major demographic unifier in the northern belt?
(A) Bengali
(B) Marathi
(C) Telugu
(D) Hindi

105. The decline in the child sex ratio in prosperous states like Haryana and Punjab is paradoxically linked to:
(A) Extreme poverty and malnourishment
(B) High tribal populations in these states
(C) Modern technology used for sex selection
(D) Complete lack of healthcare infrastructure

106. The current approach of the Family Planning Programme in India is characterized by:
(A) Large-scale coercive sterilization camps
(B) Voluntary choice with no fixed targets
(C) Compulsory one-child national policy
(D) Complete withdrawal of state subsidies

107. According to demographic principles, if the Total Fertility Rate (TFR) falls below 2.1 and stays there for a long period, the population will eventually:
(A) Begin to shrink
(B) Grow exponentially
(C) Stabilize indefinitely
(D) Experience a youth bulge

108. According to the 2011 Census, which religious community is the largest minority in India?
(A) Muslims
(B) Christians
(C) Sikhs
(D) Buddhists

109. Match the items in List I with their specific characteristics in List II and select the correct answer from the options given below.
List I: (Demographic Term)
P. Fecundity
Q. Morbidity
R. Mortality
S. Nuptiality
List II: (Characteristic)
1. Frequency of marriage in a population
2. Physiological capacity to reproduce
3. Incidence of disease or illness in a population
4. Incidence of death in a population
(A) P-2, Q-3, R-4, S-1
(B) P-1, Q-2, R-3, S-4
(C) P-2, Q-4, R-3, S-1
(D) P-3, Q-1, R-4, S-2

Click Here to Buy book on Amazon

empowerment, a scarcity of women often leads to their further marginalization and vulnerability, rather than an automatic rise in status.

56. (A) A high proportion of young population and high fertility rates
A population pyramid with a broad base and a narrow top indicates a young population structure. This shape occurs when birth rates are high, resulting in a large number of children at the bottom of the pyramid. As age increases, the cohorts become smaller due to mortality. This pattern is typical of nations in the early stages of demographic transition.

57. (A) Uttar Pradesh, Maharashtra, Bihar
India's population is highly concentrated in a few large states. Uttar Pradesh, Maharashtra, and Bihar are the three most populous states and collectively account for nearly one-third of the country's total population. These states have large geographical areas and high growth rates, making them critical to the nation's demographic trends and the implementation of development policies.

58. (D) 943 females per 1000 males
The 2011 Census recorded the overall sex ratio in India at nine hundred and forty-three females for every one thousand males. This figure showed a slight improvement from the nine hundred and thirty-three recorded in the 2001 Census. Despite this gradual increase, the ratio remains skewed toward males, highlighting continued challenges regarding gender equity and the survival of female children.

59. (C) The Northern Plains
The Northern Plains of India, also known as the Indo-Gangetic Plains, host the largest concentration of the country's population. This region features flat land, fertile alluvial soil, and an abundant water supply from perennial rivers, making it ideal for intensive agriculture. These favorable physical conditions, combined with a long history of settlement, have made it a densely populated area.

60. (B) Declining child sex ratio
The 'Beti Bachao Beti Padhao' scheme was launched to address the critical issue of the declining child sex ratio in many Indian districts. It focuses on preventing gender-biased sex selection and ensuring the survival and protection of the girl child. Additionally, the program emphasizes the importance of education for girls, aiming to change societal mindsets and improve female status.

61. (C) 100,000
The Census of India classifies urban areas into six categories based on their population size. A Class I town, which is often referred to as a city, is defined as an urban settlement having a population of one hundred thousand or more. This classification helps in the systematic study of urbanization trends and the allocation of administrative resources for urban centers.

62. (A) Rural to Urban
Migration patterns in India vary significantly by gender. While female migration is largely driven by marriage in the rural-to-rural stream, male migration is predominantly from rural areas to urban centers. This movement is motivated by 'pull' factors such as better employment opportunities, higher wages, and access to superior education and healthcare facilities found in large cities.

63. (A) NCT of Delhi
Among all the states and union territories in India, the National Capital Territory of Delhi has the highest population density. As a major political, economic, and educational hub, Delhi attracts massive numbers of migrants from across the country. This intense urbanization and the concentration of diverse activities result in a density of over eleven thousand persons per square kilometer.

64. (C) Large projects like dams, mines, and sanctuaries
Tribal migration in Central India is often involuntary and caused by the acquisition of their traditional lands for large-scale development projects. The construction of massive dams, the opening of new mines, and the establishment of wildlife sanctuaries frequently lead to the displacement of entire tribal communities. This forced movement disrupts their traditional livelihoods, forcing them to move in search of survival.

NODIA

84. (A) Both A and R are true and R is the correct explanation of A.
Rapid urbanization in India is often accompanied by the proliferation of slums because the growth of cities usually outpaces their infrastructure development. When large numbers of poor rural migrants arrive in cities, they find that affordable housing is non-existent. Without enough low-cost housing and basic services, these migrants are forced to live in informal, crowded, and unhygienic settlements.

85. (C) Better jobs and higher wages in cities
Pull factors are the positive features of a destination that attract people to move there. In the context of rural-to-urban migration in India, the most powerful pull factor is the prospect of better economic opportunities. Cities offer a wider variety of jobs and higher wages than rural areas. The chance for a higher standard of living draws millions of migrants.

86. (B) 31.1 percent
The 2011 Census showed that approximately thirty-one point one percent of India's total population lived in urban areas. This represented a steady increase from twenty-seven point eight percent in the 2001 Census. While India remains a predominantly rural country, the pace of urbanization is accelerating as more people move to cities and many large villages are reclassified as census towns.

87. (B) Scheduled Tribes and rural agriculturalists
Large-scale developmental projects like the Narmada Valley Project have significant demographic consequences, particularly regarding displacement. The submergence of vast areas for dam construction primarily affected rural communities, specifically Scheduled Tribes and small-scale farmers who lived in the river valley. These groups lost their ancestral lands and traditional livelihoods, leading to massive internal displacement and long-term socio-economic challenges.

88. (C) 10 million
In the field of urban geography and demography, the term 'Mega City' is typically used to describe an urban agglomeration or metropolitan area with a total population exceeding ten million people. In India, cities like Mumbai, Delhi, and Kolkata fall into this category. These mega cities face unique challenges related to high population density and intense infrastructure and service demand.

89. (B) Uttar Pradesh and Bihar
Uttar Pradesh and Bihar are the two largest source regions for internal migrants in India. Due to high population pressure on limited agricultural land and a lack of sufficient industrial development, many people from these states move to other parts of the country. These migrants primarily head to more prosperous states like Maharashtra and Delhi in search of stable employment.

90. (A) Place of birth and Place of last residence
The Indian Census uses two fundamental questions to identify and track migration. The first asks for the person's place of birth, and if this differs from the place of enumeration, the person is a lifetime migrant. The second asks for the person's place of last residence, which helps identify recent movements. Together, these criteria provide a detailed picture of population movement.

91. (C) Forced assimilation into urban culture
The Tribal Sub-Plan is a strategy designed to ensure the socio-economic development of Scheduled Tribes while protecting them from exploitation. Its goals include improving literacy, providing better healthcare, and bridging the development gap. Crucially, the policy respects tribal identity and aims for development through integration and empowerment rather than forcing them to give up their unique culture and assimilate.

92. (C) Educated and skilled professionals
Brain drain refers to the large-scale emigration of highly educated and skilled individuals from their home country to another nation that offers better pay or working conditions. This process predominantly affects the professional sector, including doctors, engineers, and technology experts. For a developing country, brain drain represents a significant loss of human capital and the investment made in their education.

93. (C) None of the statements are incorrect
The Scheduled Caste population is a significant demographic group in India, making up

Downloaded from www.pdf.tube

involves applying smart solutions to infrastructure like water supply, electricity, transport, and waste management. By integrating information technology, the mission aims to make cities more livable and sustainable for their residents while fostering better urban governance.

75. (D) To address unmet needs for health infrastructure
The National Population Policy 2000 outlined three levels of objectives. Its immediate goal was to address the unmet needs for basic reproductive and child health services, infrastructure, and personnel. By focusing on improving the delivery of healthcare first, the policy aimed to create a foundation that would eventually lead to the medium-term goal of reaching replacement level fertility.

76. (A) 2, 1, 4, 3
According to the 2011 Census, Bihar has the highest population density among all Indian states, followed by West Bengal. Kerala ranks third in density, while Uttar Pradesh, despite being the most populous state, has a lower density than the others due to its larger land area. Therefore, the correct descending order of these states based on density is Bihar, Bengal, Kerala, and UP.

77. (D) Loss of young, able-bodied human resources
While migration provides a financial boost through remittances, it also has a significant negative impact on the source regions. Since it is mostly the young and more skilled individuals who leave the villages, the rural areas face a serious loss of their most productive human resources. This can lead to labor shortages in agriculture and a demographic imbalance in villages.

78. (D) I, II, and III
India is experiencing a significant urban transition. Goa is the most urbanized state by percentage, with over sixty percent of its population living in urban areas. Conversely, Himachal Pradesh remains the most rural state, with nearly ninety percent of its people residing in villages. These trends are driven by both the natural increase of urban populations and steady migration.

79. (B) Agriculture and unorganized construction
Seasonal or circular migration involves people moving temporarily to different locations to work for a specific period before returning home. In India, this is most common among rural laborers who work in the agricultural sector during harvest seasons or in the unorganized construction sector during the dry months. This type of migration is a vital survival strategy for many poor households.

80. (D) Migrant by place of birth
The Census of India classifies migrants based on two distinct criteria. A person is considered a migrant by place of birth if their place of enumeration during the census is different from their actual birthplace. This is a permanent record of movement throughout a person's life. The other criterion is place of last residence, which tracks the most recent move.

81. (C) 2045
The long-term objective of the National Population Policy 2000 was to achieve a stable population by the year 2045. A stable population is defined as one where the growth rate is zero, meaning that births and deaths effectively cancel each other out. To reach this goal, the policy focused on reducing fertility rates to the replacement level through health and education.

82. (A) Statutory Towns
In India, any settlement that has been legally notified as an urban area by the state government and has its own local administrative body is called a Statutory Town. These bodies can include Municipal Corporations, Municipal Committees, Cantonment Boards, or Notified Town Area Committees. This classification is based on the legal status of the settlement rather than its specific demographic characteristics.

83. (D) Greater Mumbai
According to the 2011 Census, Greater Mumbai was the largest urban agglomeration in India by population. As the country's financial capital, it serves as a massive magnet for migrants and has experienced intense urban expansion. While Delhi is a very close second and growing rapidly, Mumbai held the top position in terms of total people living within its metropolitan boundaries.

NODIA

one of the most effective ways to slow population growth.

122. (D) High infant mortality rates and high total fertility rates
The Empowered Action Group (EAG) states include eight socio-economically backward states such as Bihar, Madhya Pradesh, and Uttar Pradesh. These states are characterized by demographic challenges such as high infant mortality and high total fertility rates. Because they lag behind national averages in these indicators, they receive special attention and resources from the central government to improve health outcomes.

123. (C) Houseless Population
The Census of India makes a special effort to count the 'Houseless Population', which includes individuals who do not live in buildings. This category covers people living on roadsides, pavements, or in the open. Enumerators visit these locations, usually at night, to ensure that homeless individuals are included in the national population count, providing a more accurate demographic picture of groups.

124. (B) 1971
The Medical Termination of Pregnancy Act was passed in 1971 to provide a legal framework for the safe and legal termination of certain pregnancies. By allowing abortions under specific conditions, the act aimed to reduce the high number of deaths and complications caused by illegal and unsafe abortions. This legislation was a significant step in reproductive health policy and demographic trends.

125. (C) Agriculture
In many rural parts of India, a large number of working-age men migrate to cities in search of better-paying jobs. This leaves the women behind to manage households and take over primary responsibility for farming. This trend has led to the 'feminization of agriculture', where women now perform the bulk of the agricultural labor despite lacking formal land rights and credit.

126. (A) 3, 4, 1, 2
India's population history is divided into four distinct phases. The first was a period of stagnant growth. The second saw steady growth as death rates fell. The third was the period of rapid explosion due to improved health conditions. Finally, the period after 1981 has been characterized by high but gradually declining growth rates as fertility began to fall significantly.

127. (B) The population size an environment can sustain
Carrying capacity is a fundamental concept in ecology and demography that refers to the maximum number of individuals of a species that a particular environment can support indefinitely. For humans, this involves the ability of resources to provide enough food and water for the population without degrading the environment. Exceeding this capacity can lead to resource depletion and eventual population decline.

128. (D) The state of being unhealthy or diseased
In population studies, morbidity refers to the incidence of disease, illness, or injury within a population. It is a key measure of the overall health status of a community. High morbidity rates can significantly impact a country's demographic profile by reducing labor productivity. Tracking morbidity allows health officials to identify emerging health threats and evaluate the effectiveness of medical services.

129. (B) Kerala
The Empowered Action Group (EAG) consists of states that have historically struggled with high birth rates and poor health indicators. While Bihar, Uttar Pradesh, and Madhya Pradesh are members of this group, Kerala is not. Kerala is often cited as a model for the country, as it has achieved low fertility rates and high levels of human development.

130. (A) Free and cashless deliveries and surgeries.
This national initiative aims to eliminate out-of-pocket expenses for pregnant women and sick newborns in public health institutions. It provides free and cashless deliveries, including surgeries. The scheme also covers all costs for medicines, diagnostic tests, blood, and food. By removing financial barriers, it encourages institutional births and ensures professional medical care during the critical period of labor and delivery.

Click Here to Buy book on Amazon

over sixteen percent of the total population. While Uttar Pradesh has the largest absolute number of SC residents, Punjab has the highest percentage of SCs relative to its state population. Additionally, it is a recorded fact that Nagaland and Lakshadweep have no officially notified Scheduled Caste populations.

94. (A) I, II, III, and IV only
Urban settlements in India are defined through a mix of legal and demographic criteria. Statutory towns have formal administration, while census towns meet specific size and occupational benchmarks. Outgrowths and Urban Agglomerations reflect the physical expansion of cities beyond their legal limits. However, a large population alone does not make a village a census town without density criteria.

95. (B) Southern India
The Dravidian language family is one of the major linguistic groups in India and is primarily spoken in the southern part of the country. This family includes major languages such as Tamil, Telugu, Kannada, and Malayalam. These languages have a long and rich history and are the primary tongues of the inhabitants of the four southern states, distinguishing the region linguistically.

96. (B) Ladli Laxmi Yojana
The Ladli Laxmi Yojana is a flagship scheme of the Madhya Pradesh government designed to improve the status of the girl child. Its primary objectives are to discourage female foeticide, promote the birth of girls, and ensure their education. The scheme provides financial incentives paid at various milestones, ultimately providing a substantial sum for higher education or marriage.

97. (B) 1952
India holds the distinction of being the first country in the world to launch a comprehensive national program for family planning in 1952. The initiative was born out of the recognition that rapid population growth could hinder the nation's economic development. Over decades, the program has evolved into a holistic strategy focused on reproductive health, women's empowerment, and voluntary choices.

98. (A) Gujarat
In the tribal-dominated regions of western Madhya Pradesh, the Bhil community often engages in seasonal migration. When agricultural work is unavailable in their home villages, large numbers of Bhil laborers move to the neighboring state of Gujarat. They typically find work in the cotton fields and construction sites of Gujarat before returning home for the monsoon season to cultivate land.

99. (B) Over-urbanization
Over-urbanization refers to a situation where a city's population grows much faster than its ability to provide jobs, housing, and basic infrastructure. In cities like Delhi, Mumbai, and Kolkata, this phenomenon manifests as the rapid spread of unplanned urban sprawl and the proliferation of slums. This imbalance occurs when the 'push' from impoverished rural areas is stronger than city pull.

100. (C) North-Eastern states and the Western coast
The Christian community in India has a distinct geographic distribution. A large proportion of the Christian population is found in the North-Eastern states like Nagaland and Mizoram, where they form a majority. Significant concentrations also exist along the Western coast, particularly in Kerala and Goa, where the religion has deep historical roots. In most other regions, they form minorities.

101. (D) A city disproportionately larger than others
A 'primate city' is a concept in urban geography that describes a city that is significantly larger than any other city in the same country. Usually, a primate city is at least twice as large as the second-largest city and is the center of economic and cultural life. This phenomenon is common where development is concentrated in a single major hub.

102. (A) Madhya Pradesh
According to the 2011 Census, Madhya Pradesh has the largest absolute population of Scheduled Tribes in India. While some smaller states might have a higher percentage of tribals relative to their total population, the total number of tribal individuals is highest in Madhya Pradesh. This diverse tribal population includes major

Downloaded from www.pdf.tube

groups like the Bhils and Gonds, who are demographically vital.

103. (B) Massive youth out-migration for jobs
The term 'Ghost Villages' in the hill state of Uttarakhand refers to villages that have become almost entirely deserted. This is a direct consequence of massive out-migration, as the younger generation leaves in search of better employment opportunities in the plains. With few jobs available locally and difficult living conditions in the mountains, only the elderly are often left behind.

104. (D) Hindi
Hindi is the most widely spoken language in India and serves as a major demographic and cultural unifier, especially across the northern and central states. According to the census, nearly forty-four percent of the population identifies Hindi as their mother tongue. It is the official language of the Union and acts as a common link language for millions of people.

105. (C) Modern technology used for sex selection
Paradoxically, some of India's most economically developed states like Haryana and Punjab have recorded very low child sex ratios. This decline is not due to poverty, but rather the misuse of modern medical technologies like ultrasound for sex-selective abortion. In these regions, a strong preference for sons, combined with the financial ability to access illegal tests, has led to deficits.

106. (B) Voluntary choice with no fixed targets
The current strategy of India's Family Planning Programme is based on the principle of voluntary choice and informed consent. Moving away from the coercive methods of the past, the government now focuses on providing a wide range of contraceptive options and improving reproductive healthcare services. The emphasis is on empowering individuals to make their own decisions about family size and health.

107. (A) Begin to shrink
If a population's Total Fertility Rate remains below the replacement level of two point one for an extended period, the population will eventually stop growing and start to decrease in size. While population momentum may cause growth to continue for a few more decades, the long-term trend will be contraction. This shift also leads to a significantly older population structure.

108. (A) Muslims
According to the 2011 Census, Muslims are the largest religious minority in India, comprising approximately fourteen point two percent of the total population. They are followed by Christians, Sikhs, Buddhists, and Jains. The Muslim population is distributed across all parts of the country, with significant concentrations in states like Uttar Pradesh, West Bengal, Bihar, and the territory of Jammu and Kashmir.

109. (A) P-2, Q-3, R-4, S-1
Demography uses specific terms to describe population characteristics. Fecundity refers to the biological capacity to have children, while morbidity tracks the prevalence of disease. Mortality is the measure of deaths, and nuptiality describes the patterns and frequency of marriage within a group. Understanding these distinct concepts is essential for analyzing the complex factors that drive population change and planning.

110. (D) Fourth stage
Population aging is a characteristic of the fourth and final stage of the demographic transition. In this stage, both birth and death rates are very low, leading to a stable or even declining population. Because people are living longer and fewer babies are being born, the average age of the population increases significantly, presenting new challenges for supporting elderly dependents.

111. (A) Counter-urbanization
Counter-urbanization is a demographic and social process where people move away from overcrowded city centers to smaller towns or rural areas. This movement is often driven by a desire for a better quality of life and a cleaner environment. Advances in transportation and digital technology have made it easier for people to live in the fringes while still maintaining economic links.

112. (B) Both Mizoram and Lakshadweep
While Madhya Pradesh has the largest total number of tribal people, the highest proportion of Scheduled Tribes relative to the total population

NODIA

is found in Mizoram and Lakshadweep. In both of these regions, over ninety percent of the residents belong to Scheduled Tribes. This high concentration means that tribal culture and social structures are the dominant influence in local governance.

113. (C) Indo-European (Indo-Aryan)
The Indo-European family, specifically the Indo-Aryan branch, is the largest linguistic group in India. It is spoken by approximately three-quarters of the total population. This family includes major languages such as Hindi, Bengali, Marathi, Gujarati, Punjabi, and Odia. These languages are predominantly spoken in the northern, central, western, and eastern parts of the country, forming a vast linguistic belt.

114. (B) Developing an existing area for smart goals
Under the Smart Cities Mission, retrofitting is a strategy used to improve an existing built-up area of more than five hundred acres. Instead of starting from scratch, the goal is to introduce smart solutions and better infrastructure into the existing urban fabric to make it more efficient. This approach is practical for old city areas where complete redevelopment is not possible.

115. (D) Neo-natal Mortality Rate
The Neo-natal Mortality Rate is the best indicator for assessing the quality of healthcare provided to newborn infants. It measures the number of deaths of infants within the first twenty-eight days of life per one thousand live births. Since most of these deaths are due to complications during birth, a high rate suggests a need for better prenatal care and skilled attendance.

116. (A) 8.6 percent
According to the 2011 Census of India, Scheduled Tribes constitute approximately eight point six percent of the country's total population. This group consists of diverse communities with unique cultures, living mostly in the hilly and forested regions of Central and North-East India. Constitutional recognition and targeted development programs for STs aim to protect their rights and improve their socio-economic status nationally.

117. (D) Malwa Plateau
The Malwa Plateau is one of the most densely populated regions of Madhya Pradesh. Its high population concentration is due to a combination of fertile black cotton soil, which supports productive agriculture, and a high level of industrialization in cities like Indore and Ujjain. The relatively flat terrain and favorable climate have historically made it an attractive area for settlement and trade.

118. (A) Hindus, Muslims, Christians, Sikhs, Buddhists, Jains
India is a religiously diverse nation. According to the 2011 Census, Hindus are the largest group, followed by Muslims as the largest minority. Christians are the third-largest community, followed by Sikhs, Buddhists, and Jains. This sequence reflects the historical and social development of various faiths within the country. Each of these communities contributes to the rich cultural mosaic of India.

119. (A) Religious persecution
While marriage, employment, and education are the primary drivers of internal migration in India, religious persecution has historically not been a major cause for large-scale movement within the country. Most migration is motivated by social customs or economic needs. In contrast, millions of people move every year for marriage or to seek better jobs and education in urban centers.

120. (A) Tribal groups in Central and Eastern India.
The Austro-Asiatic language family, also known as the Nishada family, is spoken by various tribal groups primarily located in the hills and plateaus of Central and Eastern India. This includes languages like Santhali and Mundari. These communities have ancient links to the land, and their languages are an important part of the cultural heritage of states like Jharkhand and Odisha.

121. (A) Total Fertility Rate
In India, there is a strong inverse relationship between female literacy and the Total Fertility Rate. As women become more educated, they tend to marry later and have better access to family planning. This leads to a significant decline in the average number of children per woman. Increasing female literacy is considered

Click Here to Buy book on Amazon

65. (A) Boost growth by using technology for local development.
The Smart Cities Mission is an urban renewal initiative that aims to improve the quality of life in selected cities through technological and data-driven solutions. It focuses on developing core infrastructure, providing a clean and sustainable environment, and applying 'smart' solutions to city services. The goal is to create sustainable urban models that drive economic growth and local development.

66. (A) P-3, Q-2, R-4, S-1
Different migration streams have distinct drivers in the Indian context. Rural-to-rural migration is dominated by women moving for marriage, while rural-to-urban movement is largely for economic advancement. Urban-to-urban migration often involves professionals seeking better career prospects in different cities. Conversely, urban-to-rural migration is much less common and typically consists of individuals returning to their hometowns after retirement.

67. (C) Bihar
Among the states listed, Arunachal Pradesh, Mizoram, and Sikkim are all characterized by very low population densities due to their hilly terrain and remote locations. In contrast, Bihar is located in the fertile Ganga plains and has the highest population density in the entire country. Therefore, Bihar is the odd one out because its demographic profile is the opposite.

68. (B) Poverty and unemployment in rural areas
Push factors are those negative conditions in the place of origin that compel people to leave. In rural India, the primary push factors include widespread poverty, lack of sufficient employment opportunities outside of agriculture, and the increasing fragmentation of land. These economic hardships force many people to migrate to urban areas in the hope of finding more stable work.

69. (A) Maharashtra
Maharashtra is one of the most industrialized and urbanized states in India, making it a major recipient of inter-state migrants. Cities like Mumbai and Pune offer a wide range of job opportunities in manufacturing, services, and the informal sector. These 'pull' factors attract millions of people from less developed states, leading to significant net in-migration and a diverse population.

70. (C) 53
As per the 2011 Census, India had fifty-three million-plus cities, which are urban agglomerations with a population of ten lakh or more. This was a significant increase from thirty-five such cities recorded in the 2001 Census. The rise in these large cities highlights the rapid pace of urbanization and the increasing concentration of the population in large metropolitan centers.

71. (B) 2070
The National Population Policy 2000 originally set a long-term goal of achieving a stable population by the year 2045. However, due to the slower-than-expected progress in several large states, this target was later revised. The current official target for India to reach a stable population, where births and deaths are balanced and growth becomes zero, is now 2070.

72. (B) The presence of a municipality, corporation, or cantonment board
A Census Town is a settlement that is not yet legally recognized as an urban area but possesses urban characteristics. It must have a minimum population of five thousand, a density of at least four hundred persons per square kilometer, and at least seventy-five percent of the male workforce in non-agricultural jobs. Settlements with a municipality are classified as Statutory Towns.

73. (A) Females migrating primarily due to marriage
Rural-to-rural migration is the largest stream of migration in India by volume, and it is overwhelmingly dominated by females. The primary reason for this movement is the prevailing custom of patrilocal marriage, where a woman moves to her husband's village after the wedding. While some males move between villages for agricultural labor, they represent a much smaller proportion of this stream.

74. (C) Applying smart solutions to city-wide infrastructure.
The Smart Cities Mission is built on the core strategy of using technology to improve the efficiency and quality of urban services. This

NODIA

CHAPTER 09
Forests and Forest Produce

1. Which legal category of forests in Madhya Pradesh restricts all activities unless explicitly permitted by the government?
(A) Protected Forests
(B) Unclassed Forests
(C) Village Forests
(D) Reserved Forests

2. In which geographical region of Madhya Pradesh are Tropical Thorn Forests predominantly distributed?
(A) Baghelkhand Plateau
(B) Satpura-Maikal Range
(C) Chambal Valley and Northern plains
(D) Narmada-Son Valley

3. What is the approximate percentage of the total geographical area of Madhya Pradesh that is classified as forest cover?
(A) 15.6 percent
(B) 25.1 percent
(C) 30.7 percent
(D) 41.2 percent

4. Consider the following statements regarding the districts with the highest forest cover in Madhya Pradesh:
I. Balaghat has the highest total forest cover area in the state.
II. Ujjain has the lowest total forest cover area in the state.
III. Chhindwara ranks second in terms of total forest cover area.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II, and III

5. Which characteristic best defines the Tropical Moist Deciduous Forests of Madhya Pradesh?
(A) Trees shed their leaves completely and remain bare for over eight months of the year.
(B) They exhibit dense lower canopies and retain moisture during dry seasons.
(C) They consist almost exclusively of stunted thorny bushes and xerophytic shrubs.
(D) They are entirely evergreen throughout the year and never shed their leaves.

6. What is the primary reason for the dense forest cover in the south-eastern districts of Madhya Pradesh like Balaghat and Mandla?
(A) Complete absence of human settlements in the region.
(B) High average annual rainfall and favorable soil conditions.
(C) Exclusive planting of rapid-growing exotic species by the government.
(D) Flat terrain that prevents water runoff.

7. What is the rank of Madhya Pradesh among all Indian states in terms of total forest cover area?
(A) First
(B) Second
(C) Third
(D) Fourth

8. Identify the incorrect statement about Tropical Dry Deciduous Forests in Madhya Pradesh.
(A) They require moderate rainfall, generally between 75 cm and 100 cm.
(B) They are geographically confined to the extreme northern districts like Bhind.
(C) They undergo a distinct leaf-shedding period during the dry summer months.
(D) Teak remains one of the most commercially valuable and sought-after species here.

9. Which of the following is an odd one out regarding the common species found in the mixed forests of Madhya Pradesh?
(A) Saja
(B) Pine
(C) Tendu
(D) Mahua

Downloaded from www.pdf.tube

10. Tropical Moist Deciduous Forests in Madhya Pradesh are typically found in areas receiving an average annual rainfall of:
(A) Less than 50 cm
(B) 50 cm to 75 cm
(C) 100 cm to 150 cm
(D) More than 200 cm

11. Which important commercial tree species dominates the Satpura range forests in areas like Hoshangabad and Betul?
(A) Sal
(B) Deodar
(C) Sandalwood
(D) Teak

12. How are forests primarily classified in Madhya Pradesh based on their legal status?
(A) National Parks, Sanctuaries, and Biosphere Reserves
(B) Tropical, Temperate, and Alpine forests
(C) Reserved, Protected, and Unclassed forests
(D) Teak, Sal, and Mixed forests

13. Which of the following tree species is not typically found in the Tropical Thorn Forests of Madhya Pradesh?
(A) Sal
(B) Babul
(C) Khair
(D) Palash

14. Which forest type covers the maximum geographical area in Madhya Pradesh?
(A) Tropical Moist Deciduous Forests
(B) Tropical Thorn Forests
(C) Tropical Dry Deciduous Forests
(D) Sub-tropical Broadleaved Hill Forests

15. Identify the correct pair regarding the forest cover distribution in Madhya Pradesh.
(A) Highest forest cover percentage - Ujjain
(B) Lowest forest cover percentage - Balaghat
(C) Highest absolute forest area - Chhindwara
(D) Lowest absolute forest area - Ujjain

16. Which of the following statements correctly identifies the position of Madhya Pradesh regarding its forest wealth in the national context?
(A) It holds the largest absolute forest cover area among all states in India.
(B) It accounts for more than thirty percent of India's total forest cover.
(C) It has the largest forest cover area but the lowest percentage of geographical area under forests.
(D) It ranks second in forest cover behind Arunachal Pradesh.

17. Which major region in Madhya Pradesh is characterized by extensive patches of mixed deciduous forests rather than pure teak or sal stands?
(A) The Bundelkhand plateau
(B) The central Narmada valley
(C) The extreme eastern borders near Chhattisgarh
(D) The high peaks of the Maikal range

18. What is the primary cause for the minimal area of unclassed forests in Madhya Pradesh compared to reserved and protected forests?
(A) Systematic legal notification of lands into reserved or protected categories.
(B) Widespread and complete privatization of all formerly unclassed land parcels.
(C) Systematic conversion of barren lands into industrial zones and agricultural plots.
(D) Rampant deforestation across the state leaving no unclassed forest lands behind.

NODIA

19. Which feature is most appropriate for describing the vegetation of Tropical Thorn Forests in Madhya Pradesh?
(A) Tall, straight trunks with broad leaves.
(B) Thick canopy blocking all sunlight to the forest floor.
(C) Heavy growth of epiphytes and wild orchids.
(D) Stunted trees with deep root systems and thorny branches.

20. Match the following forest types in List I with their dominant regions in Madhya Pradesh in List II:
List I: (Forest Type)
P. Tropical Moist Deciduous
Q. Tropical Dry Deciduous
R. Tropical Thorn Forest
S. Sub-tropical Hill Forest
List II: (Dominant Region/District)
1. Pachmarhi region

2. Morena and Sheopur
3. Hoshangabad and Betul
4. Mandla and Balaghat

(A) P-4, Q-3, R-2, S-1
(B) P-3, Q-4, R-1, S-2
(C) P-4, Q-2, R-3, S-1
(D) P-1, Q-3, R-2, S-4

21. The northern hill forests of Madhya Pradesh, specifically in the Vindhyan range, are predominantly characterized by which type of vegetation?
(A) Dense and tropical evergreen forests.
(B) Coastal mangrove swamps and wetlands.
(C) Open scrub and dry deciduous forests.
(D) High-altitude alpine pastures and meadows.

22. Identify the incorrect statement regarding the legal classification of forests in Madhya Pradesh.
(A) Reserved forests enjoy the highest degree of protection under the law.
(B) Unclassed forests constitute the largest proportion of the total forest area in the state.
(C) Protected forests allow local communities limited rights for grazing and fuel wood collection.
(D) Commercial exploitation in reserved forests is strictly regulated by the state government.

23. What is the dominant tree species found in the Tropical Moist Deciduous Forests of eastern Madhya Pradesh?
(A) Babul
(B) Khair
(C) Khejri
(D) Sal

24. Read the given statements and select the correct option.
Statement I: Mixed forests are widely distributed across the state, serving as vital sources of fuelwood and minor forest produce.
Statement II: Saja, Dhaora, and Tendu are prominent components of these mixed forests.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct but Statement II is incorrect.
(D) Statement I is incorrect but Statement II is correct.

25. Tropical Thorn Forests in Madhya Pradesh are an effect of which primary geographical cause?
(A) Extremely high altitudes found within the northern alluvial plains.
(B) Low and erratic rainfall, often less than 75 cm annually.
(C) High soil salinity leading to stunted growth.
(D) Excessive artificial deforestation by local industries.

26. Which of the following provides the most appropriate definition of the 'total recorded forest area' in Madhya Pradesh?
(A) Land areas having a tree canopy density of more than 10 percent as measured by remote sensing.
(B) Designated areas strictly protected under the provisions of the Wildlife Protection Act.
(C) Lands exclusively inhabited by tribal communities traditionally engaged in forestry activities.
(D) Geographic areas legally recorded as forests in government records.

27. Based on percentage of geographical area, which district of Madhya Pradesh has the maximum forest cover?
(A) Balaghat
(B) Umaria
(C) Mandla
(D) Sheopur

28. Which district in Madhya Pradesh is prominently known for the presence of Tropical Moist Deciduous Forests?
(A) Balaghat
(B) Jhabua
(C) Bhind
(D) Neemuch

29. Mixed forests in Madhya Pradesh are best defined as:
(A) Forests consisting exclusively of Teak and Sal.
(B) Areas where natural forests mix with agricultural crops.
(C) Forests where no single tree species

Click Here to Buy book on Amazon

94. Match the following rivers in List I with their forested catchment areas in Madhya Pradesh in List II:
List I: (Rivers)
P. Narmada
Q. Chambal
R. Betwa
S. Son
List II: (Forested Catchment Area)
1. Amarkantak and Maikal ranges
2. Vindhyan range (Bhopal/Raisen)
3. Janapav hills (Vindhyan scarps)
4. Eastern Baghelkhand and Amarkantak
(A) P-1, Q-3, R-2, S-4
(B) P-3, Q-1, R-4, S-2
(C) P-4, Q-2, R-3, S-1
(D) P-1, Q-4, R-2, S-3

95. The extent of deforestation in Madhya Pradesh has prompted the government to legally ban the felling of which ecologically vital tree species without special permission?
(A) Various species of Eucalyptus planted for commercial timber.
(B) Green live trees, specifically Sal and Teak.
(C) Natural bamboo clumps found in protected forest ranges.
(D) Indigenous Babul trees used for local agricultural tools.

96. To modernize forest fire prevention, the Madhya Pradesh Forest Department relies heavily on alert systems generated by:
(A) Drones manually flown by local villagers.
(B) Satellite imagery and thermal mapping from the Forest Survey of India.
(C) Trained sniffer dogs patrolling the perimeters.
(D) Ground-level sensors and heat detectors embedded throughout all national parks.

97. Under which central government initiative are the Tiger Reserves of Madhya Pradesh managed?
(A) Project Elephant
(B) National Wildlife Action Plan
(C) Integrated Forest Management Scheme
(D) Project Tiger

98. In the context of Joint Forest Management (JFM) in Madhya Pradesh, what does 'VFC' stand for?
(A) Village Forest Committee
(B) Voluntary Forestry Commission
(C) Vigilance for Conservation
(D) Village Farming Community

99. Identify the correct pair regarding forest administration terminology in Madhya Pradesh.
(A) Divisional Forest Officer - Heads a Forest Beat
(B) Conservator of Forests - Heads a Forest Circle
(C) Forest Ranger - Heads a Forest Sub-division
(D) Forest Guard - Heads a Forest Division

NODIA

100. Which of the following is the most appropriate primary cause of deforestation in the heavily populated central districts of Madhya Pradesh?
(A) Lightning strikes causing natural mega-fires.
(B) Overgrazing by wild herbivores like deer and bison.
(C) Encroachment for agricultural expansion and illicit felling for timber.
(D) Rapid spread of fungal diseases wiping out entire forest tracts.

101. Consider the following statements regarding forest policies in Madhya Pradesh:
I. The first forest policy of the state was formulated in 1952.
II. The current state forest policy was implemented in 2005.
III. Joint Forest Management (JFM) was entirely abolished by the 2005 policy.
IV. The policy emphasizes the participation of local communities in conservation.
Which of the above statement(s) is/are incorrect?
(A) I and II
(B) III only
(C) II and IV
(D) I and IV

102. Which of the following represents the correct sequence of these Tiger Reserves in Madhya Pradesh from North to South?
(A) Panna - Bandhavgarh - Kanha - Pench
(B) Pench - Kanha - Bandhavgarh - Panna
(C) Bandhavgarh - Panna - Pench - Kanha
(D) Panna - Pench - Bandhavgarh - Kanha

(D) Bhind

41. The biological cause of lac production is the secretion by which of the following organisms?
(A) A parasitic fungus
(B) A scale insect
(C) A species of tree frog
(D) A type of wild honey bee

42. The following question consists of two statements, one labelled as Assertion (A) and the other as Reason (R). Examine these two statements carefully and select the correct answer.
Assertion (A): The eastern districts of Madhya Pradesh such as Dindori and Mandla have significant tribal populations dependent on forests.
Reason (R): The dense Sal and mixed forests in this region provide abundant Non-Timber Forest Produce essential for tribal livelihoods.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

43. Identify the incorrect statement regarding Sal forests in Madhya Pradesh.
(A) They are concentrated in the eastern parts of the state.
(B) They constitute the largest share of forest cover, exceeding teak forests.
(C) Sal timber is highly durable and resistant to white ants.
(D) Sal seeds are economically important for oil extraction.

44. Which region is famous for producing high-quality teak timber, often referred to as 'Bori Teak'?
(A) Rewa
(B) Panna
(C) Gwalior
(D) Hoshangabad

45. Which district in Madhya Pradesh is among the leading producers of Tendu leaves?
(A) Indore
(B) Gwalior
(C) Sagar
(D) Ujjain

46. Which wildlife sanctuary is located amidst the densely forested northern hills of the Vindhyan range?
(A) Bori Wildlife Sanctuary
(B) Ratapani Wildlife Sanctuary
(C) Nauradehi Wildlife Sanctuary
(D) Kheoni Wildlife Sanctuary

47. Tendu leaves collected from the forests of Madhya Pradesh are primarily used for which industry?
(A) Essential oils
(B) Bidi rolling
(C) Leather tanning
(D) Paper manufacturing

48. Identify the correct statement regarding the central forest zone of Madhya Pradesh.
(A) The entire region is completely and utterly devoid of teak tree species.
(B) It is a transition zone with a mix of dry and moist deciduous species.
(C) This geographical zone receives the lowest annual rainfall in the entire state.
(D) All the lands here are legally classified entirely as unclassed forest.

NODIA

49. Bamboo in Madhya Pradesh is legally classified under which category?
(A) Grass
(B) Tree
(C) Shrub
(D) Herb

50. Consider the following districts of Madhya Pradesh:
I. Balaghat
II. Chhindwara
III. Betul
IV. Ujjain
Which of the following shows the correct descending order of their total forest cover area?
(A) I, II, III, IV
(B) I, III, II, IV
(C) II, I, IV, III
(D) IV, III, II, I

(A) I, II, and III
(B) I, II, and IV
(C) II, III, and IV
(D) I, III, and IV

73. What effect does the seasonal collection of NTFPs have on the tribal economy of Madhya Pradesh?
(A) It forces tribal populations to permanently migrate to urban areas in search of work.
(B) It leads to immediate and absolute deforestation.
(C) It replaces agriculture completely as the sole occupation.
(D) It provides supplementary income and food security during lean agricultural periods.

74. Which prominent medicinal plant found in the forests of Madhya Pradesh is widely known as 'Indian Gooseberry' and is a key ingredient in Triphala?
(A) Harra
(B) Bahera
(C) Amla
(D) Ashwagandha

75. Identify the correct statement about the wildlife sanctuaries of Madhya Pradesh.
(A) Ralamandal is the largest wildlife sanctuary in the state.
(B) Ghatigaon sanctuary was specifically created to protect the Bengal Tiger.
(C) Karera sanctuary is famous for protecting the Indian Rhino.
(D) Nauradehi is the largest wildlife sanctuary in the state.

76. Mahua (Madhuca indica) holds immense significance for the tribal populations of Madhya Pradesh primarily because:
(A) The durable wood of the Mahua tree is the primary material used for building homes.
(B) Its leaves are exclusively used for writing traditional scripts.
(C) It is a sacred tree that is legally prohibited from any human use.
(D) Its flowers and seeds provide food, oil, and traditional liquor ingredients.

77. Which endemic and endangered subspecies of the Barasingha (Hard Ground Swamp Deer) is exclusively found in Kanha National Park?
(A) Cervus duvaucelii duvaucelii
(B) Cervus duvaucelii ranjitsinhi
(C) Axis axis
(D) Cervus duvaucelii branderi

78. The forest-based plywood industry in Madhya Pradesh primarily utilizes timber from which region?
(A) Chambal ravines
(B) Malwa plateau
(C) Bundelkhand uplands
(D) Narmada valley and Satpura ranges

79. Identify the incorrect statement regarding forest-based cottage industries in Madhya Pradesh.
(A) Bidi rolling is a major cottage industry generating extensive rural employment.
(B) Paper manufacturing using bamboo is considered a micro-scale cottage industry.
(C) Bamboo weaving and basketry are widespread among tribal artisans.
(D) Dona-Pattal (leaf plate) making utilizes leaves of Sal and Banyan trees.

80. Consider the following statements about Non-Timber Forest Produce (NTFP) in Madhya Pradesh:
I. Tendu leaf is a major NTFP used in the bidi industry.
II. Sal seed is widely collected for oil extraction.
III. Mahua flowers are primarily used by tribal communities for food and local beverages.
IV. Madhya Pradesh produces a significant portion of India's lac.
V. The state government prohibits the commercial sale of all medicinal plants.
Which of the above statement(s) is/are correct?
(A) I, II, III, and IV only
(B) I, III, IV, and V only
(C) II, III, IV, and V only
(D) I, II, IV, and V only

81. Which wildlife sanctuary in Madhya Pradesh recently gained international prominence for the successful reintroduction of African Cheetahs?
(A) Bori Wildlife Sanctuary
(B) Singhori Wildlife Sanctuary
(C) Kuno National Park

Downloaded from www.pdf.tube

63. Which part of the Mahua tree is collected for extracting 'Dori' oil, widely used by tribal communities for cooking and lighting?
(A) Seeds
(B) Bark
(C) Leaves
(D) Flowers

64. Match the following national parks in List I with their key features or locations in List II:
List I: (National Park)
P. Bandhavgarh
Q. Pench
R. Satpura
S. Madhav
List II: (Key Feature/Location)
1. Highest density of tigers
2. Inspired Kipling's 'Jungle Book'
3. Located in Shivpuri district
4. Rugged terrain of Pachmarhi
(A) P-1, Q-2, R-4, S-3
(B) P-2, Q-1, R-3, S-4
(C) P-4, Q-3, R-2, S-1
(D) P-1, Q-3, R-4, S-2

65. What is the primary cause for the state government establishing a Minimum Support Price (MSP) for specific Minor Forest Produces?
(A) To prevent the exploitation of tribal gatherers and ensure fair wages.
(B) To maximize corporate profit margins within the regional retail and trade sectors.
(C) To discourage the collection of forest produce completely.
(D) To levy higher taxes on the gathered produce.

66. The National Chambal Sanctuary is primarily dedicated to the conservation of which critically endangered species?
(A) Gharial (Gavialis gangeticus)
(B) Asiatic Lion (Panthera leo persica)
(C) Snow Leopard (Panthera uncia)
(D) Indian Wild Ass (Equus hemionus khur)

67. Identify the correct pair regarding lac production regions in Madhya Pradesh.
(A) Major lac producing zone - Northern districts like Bhind, Morena
(B) Major lac producing zone - Western districts like Jhabua, Alirajpur
(C) Major lac producing zone - Southeastern districts like Seoni, Mandla, Balaghat
(D) Major lac producing zone - Central districts like Bhopal, Sehore

68. Which medicinal plant, commonly known as 'White Musli', is naturally found in the dense forests of Madhya Pradesh and possesses high commercial value?
(A) Rauvolfia serpentina
(B) Chlorophytum borivilianum
(C) Ocimum sanctum
(D) Azadirachta indica

69. The tribal cooperative 'Vindhya Herbals' operates under the guidance of which state entity to promote forest-based products?
(A) MP State Minor Forest Produce Federation
(B) MP Tourism Board
(C) MP State Industrial Development Corporation
(D) MP Handicrafts Development Corporation

70. Minor Forest Produce (MFP) in Madhya Pradesh is legally defined to include:
(A) All varieties of timber species that exceed a girth measurement of fifty centimeters.
(B) Minerals extracted from forest areas.
(C) Non-timber forest produce including bamboo, brushwood, canes, and honey.
(D) Wild animals poached for commercial value.

NODIA

71. Which is the smallest wildlife sanctuary in Madhya Pradesh by area?
(A) Ralamandal
(B) Sailana
(C) Sardarpur
(D) Karera

72. Consider the following statements regarding timber production in Madhya Pradesh:
I. Teak provides the highest revenue among all timber species in the state.
II. Timber logging in reserved forests is executed under strict working plans.
III. Private contractors are granted permanent ownership of forest lands for logging.
IV. State forest depots act as nodal points for the auction and sale of timber.
Which of the above statement(s) is/are correct?

(D) Expansion of agricultural land by landless populations for livelihood.

112. How many Biosphere Reserves are currently recognized in Madhya Pradesh?
(A) One
(B) Two
(C) Three
(D) Five

113. Which major developmental projects have historically led to substantial submergence of forest areas in Madhya Pradesh?
(A) Large-scale construction of multi-lane expressways and interstate road networks.
(B) Setting up of solar parks in wasteland areas.
(C) Major hydroelectric and irrigation dam projects such as Narmada Sagar.
(D) Installation of wind turbine farms on barren hills.

114. What is the role of the 'Principal Chief Conservator of Forests' (PCCF) in Madhya Pradesh?
(A) The senior political minister who is in charge of the state's forest portfolio.
(B) The highest-ranking forest officer and administrative head of the state department.
(C) He is a judicial magistrate appointed to handle wildlife crimes exclusively.
(D) He is the central government representative who overrides state policies.

115. What is the core philosophy behind the Joint Forest Management (JFM) strategy in Madhya Pradesh?
(A) Complete and total privatization of various forest lands to local corporate entities.
(B) Exclusion of humans from all forest boundaries using armed guards.
(C) Handing over absolute ownership of national parks to village panchayats.
(D) Partnership between the state forest department and local communities.

116. What is the status of Madhya Pradesh regarding its tiger population according to official estimations?
(A) The state currently ranks third behind Karnataka and Uttarakhand in tiger counts.
(B) Its tiger population has become completely extinct.
(C) It is tied with Maharashtra for the second position.
(D) It has the highest tiger population in India, retaining the 'Tiger State' status.

117. Which season experiences the highest incidence of forest fires in Madhya Pradesh?
(A) Winter (December to February)
(B) Summer (March to June)
(C) Monsoon (July to September)
(D) Post-Monsoon (October to November)

118. What is the effect of large-scale open-cast coal mining in the Singrauli region of Madhya Pradesh on the local environment?
(A) Significant increase in dense forest cover.
(B) Creation of new tropical rainforests.
(C) Improvement in groundwater levels and quality.
(D) Severe deforestation, habitat fragmentation, and soil degradation.

119. What is the highest administrative unit of the Forest Department in Madhya Pradesh?
(A) Forest Circle
(B) Forest Division
(C) Forest Range
(D) Forest Beat

120. Which state-sponsored program was initiated to increase green cover by planting saplings along the banks of the Narmada River?
(A) Namami Devi Narmade (Narmada Seva Yatra)
(B) Narmada Seva Mission
(C) Green Narmada Project
(D) River Rejuvenation Scheme

121. Choose the correct order of the following major forest produces of Madhya Pradesh based on their general volume/value of extraction (Highest to Lowest):
(A) Teak Timber - Tendu Leaves - Bamboo - Sal Seed
(B) Sal Seed - Bamboo - Tendu Leaves - Teak Timber
(C) Bamboo - Teak Timber - Sal Seed - Tendu Leaves
(D) Tendu Leaves - Sal Seed - Teak Timber - Bamboo

Click Here to Buy book on Amazon

(D) Gandhi Sagar Sanctuary

82. The wood of the 'Khair' tree (Acacia catechu) in Madhya Pradesh is primarily processed to produce:
(A) Katha
(B) Plywood
(C) Matchsticks
(D) Paper pulp

83. The collection and trade of nationalized Minor Forest Produce in Madhya Pradesh are strictly controlled by the state government. Which of the following is a nationalized forest produce?
(A) Honey
(B) Mahua flowers
(C) Chironji
(D) Tendu leaves

84. Which is the largest National Park in Madhya Pradesh in terms of core area?
(A) Bandhavgarh National Park
(B) Panna National Park
(C) Kanha National Park
(D) Satpura National Park

85. Which tribal community in Madhya Pradesh relies heavily on the collection of Chironji (Buchanania lanzan) as a major source of cash income?
(A) Sahariya
(B) Baiga
(C) Gond
(D) Bhil

86. What is the most appropriate description of the collection season for Mahua flowers in Madhya Pradesh?
(A) Deep winter (December to January)
(B) Spring and early summer (March to May)
(C) Peak monsoon (July to August)
(D) Autumn (October to November)

87. Which National Park in Madhya Pradesh is geographically bisected by the NH-46 and is known for the George Castle?
(A) Sanjay National Park
(B) Madhav National Park
(C) Kuno National Park
(D) Van Vihar National Park

88. Which of the following is not considered a Minor Forest Produce in Madhya Pradesh?
(A) Harra
(B) Teak logs
(C) Bahera
(D) Amla

89. Which district in Madhya Pradesh is famous for the cottage industry of making wooden toys, particularly utilizing softwoods?
(A) Itarsi (Hoshangabad)
(B) Budhni (Sehore)
(C) Bina (Sagar)
(D) Mhow (Indore)

90. The 'Sanjeevani Institute' established by the Madhya Pradesh Forest Department is primarily responsible for:
(A) Processing, marketing, and conservation of medicinal and aromatic plant species.
(B) Breeding and rehabilitation of various endangered wildlife species across the state.
(C) Training forest guards in modern weaponry.
(D) Eradicating invasive weeds from national parks.

91. Which was the first Biosphere Reserve to be established in Madhya Pradesh?
(A) Pachmarhi Biosphere Reserve
(B) Panna Biosphere Reserve
(C) Achanakmar-Amarkantak Biosphere Reserve
(D) Satpura Biosphere Reserve

NODIA

92. Which constitutional amendment provided the legal backing for decentralized governance, deeply influencing the structure of Joint Forest Management in Madhya Pradesh?
(A) 42nd Amendment
(B) 44th Amendment
(C) 73rd Amendment
(D) 86th Amendment

93. In which year did Madhya Pradesh launch 'Project Tiger' for the first time in Kanha National Park?
(A) 1970
(B) 1973
(C) 1980
(D) 1986

dominates the canopy.
(D) Plantations created by the forest department combining exotic and native species.

30. Which of the following pairs of tree species and forest type is correctly matched for Madhya Pradesh?
(A) Sal - Tropical Thorn Forest
(B) Babul - Tropical Moist Deciduous Forest
(C) Bamboo - Alpine Forest
(D) Teak - Tropical Dry Deciduous Forest

31. The western forest zone of Madhya Pradesh, encompassing districts like Jhabua and Alirajpur, is primarily characterized by:
(A) Dense Sal forests
(B) Unexplored virgin evergreen forests
(C) Highly degraded thorn and scrub forests
(D) Extensive natural bamboo brakes

32. The 'Sal Borer' insect periodically causes severe damage to Sal forests. In which district of Madhya Pradesh was a major epidemic of Sal borer observed in the late 1990s?
(A) Neemuch
(B) Mandla
(C) Jhabua
(D) Datia

33. The eastern forest zone of Madhya Pradesh, covering Balaghat, Mandla, and Dindori, is most famous for the extensive occurrence of:
(A) Pure Teak forests
(B) Pure Sal forests
(C) Thorn and Scrub forests
(D) Coniferous forests

34. Match the following minor forest produce in List I with their primary uses or industries in List II:
List I: (Minor Forest Produce)
P. Tendu leaf
Q. Khair wood
R. Sal seed
S. Lac
List II: (Primary Use/Industry)
1. Oil extraction
2. Bidi making
3. Sealing wax and bangles
4. Katha production
(A) P-2, Q-4, R-1, S-3
(B) P-4, Q-2, R-3, S-1
(C) P-2, Q-1, R-4, S-3
(D) P-3, Q-4, R-1, S-2

35. Teak forests approximately cover what percentage of the total forest area in Madhya Pradesh?
(A) 4 percent
(B) 10 percent
(C) 19 percent
(D) 40 percent

36. Lac production in Madhya Pradesh is dependent on specific host trees. Which is an odd one out that is not a primary host for the lac insect?
(A) Pine
(B) Palash
(C) Kusum
(D) Ber

37. What is the common ecological feature distinguishing the forests of the Satpura range from those of the northern Vindhyan range?
(A) Satpura forests receive higher rainfall and support denser moist vegetation.
(B) Vindhyan forests are classified as being exclusively tropical evergreen.
(C) Satpura forests are almost entirely composed of thorny desert species.
(D) There is no ecological difference as both are identically dry deciduous.

38. What is the botanical name of the Sal tree found abundantly in eastern Madhya Pradesh?
(A) Tectona grandis
(B) Madhuca indica
(C) Acacia catechu
(D) Shorea robusta

39. What is the primary industrial use of bamboo extracted from the forests of Madhya Pradesh?
(A) Manufacture of synthetic rubber
(B) Matchbox splints
(C) Essential oil extraction
(D) Paper and pulp industry

40. Which of the following districts is an exception and does not belong to the heavily forested central zone of Madhya Pradesh?
(A) Sehore
(B) Raisen
(C) Hoshangabad

Downloaded from www.pdf.tube

103. In Joint Forest Management, the local communities involved are typically compensated through:
(A) Direct and permanent transfer of ownership of forest lands to local individuals.
(B) A share in the revenue from the sale of various forest produce.
(C) Exemption from paying all state taxes.
(D) Free supply of firearms for protection.

104. The annual tree-planting festival observed in Madhya Pradesh to promote afforestation is called:
(A) Hariyali Mahotsav
(B) Vriksha Puja
(C) Krishi Mahotsav
(D) Van Mahotsav

105. What is considered the primary cause of most forest fires in Madhya Pradesh?
(A) Frequent lightning strikes that occur during intense dry summer thunderstorms.
(B) Spontaneous combustion of dry leaves due to extreme solar radiation.
(C) Anthropogenic activities like campfires and collection of forest produce.
(D) Friction between dry bamboo stalks during high winds.

106. Which of the following is an odd one out, as it is NOT designated as a Tiger Reserve in Madhya Pradesh?
(A) Kanha
(B) Madhav
(C) Panna
(D) Bandhavgarh

107. How do the dense forests of the Satpura and Maikal ranges impact the regional climate of Madhya Pradesh?
(A) They moderate summer temperatures, induce local rainfall, and prevent soil erosion.
(B) They cause extreme desertification by absorbing all groundwater.
(C) They significantly increase the atmospheric temperature due to dense canopy cover.
(D) They prevent the entry of monsoon winds into the state completely.

108. The Achanakmar-Amarkantak Biosphere Reserve is shared between Madhya Pradesh and which other state?
(A) Chhattisgarh
(B) Maharashtra
(C) Gujarat
(D) Uttar Pradesh

109. The following question consists of two statements, one labelled as Assertion (A) and the other as Reason (R). Examine these two statements carefully and select the correct answer.
Assertion (A): Joint Forest Management has been highly successful in regenerating degraded forest lands in Madhya Pradesh.
Reason (R): It empowers local communities by giving them a direct economic stake in the protection and sustainable use of forests.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

NODIA

110. Consider the following statements regarding afforestation efforts in Madhya Pradesh:
I. Panchvan Yojana was launched for afforestation in districts with less than 33 percent forest cover.
II. Social forestry schemes explicitly exclude the participation of local farmers.
III. Compensatory afforestation is mandatory when forest land is diverted for non-forest use.
Which of the above statement(s) is/are incorrect?
(A) I and II only
(B) II only
(C) III only
(D) I and III only

111. The issue of forest encroachment in Madhya Pradesh is closely tied to which socioeconomic factor?
(A) A high influx of international tourists setting up permanent camping sites.
(B) Urban real estate developers building skyscrapers in reserved forests.
(C) Establishment of massive IT parks in core wildlife zones.

51. Which district of Madhya Pradesh is traditionally famous for its government lac processing factory?
(A) Bhopal
(B) Khargone
(C) Morena
(D) Umaria

52. Which major river system originates from the eastern forest zones of Madhya Pradesh, greatly benefiting the regional ecology?
(A) Chambal
(B) Betwa
(C) Sindh
(D) Narmada

53. What is the botanical name of Teak, the most prominent timber species found in Madhya Pradesh?
(A) Shorea robusta
(B) Butea monosperma
(C) Tectona grandis
(D) Diospyros melanoxylon

54. Which region of Madhya Pradesh is famously known as the 'Bamboo State' owing to dense bamboo brakes?
(A) Northern plains
(B) Malwa plateau
(C) Southeastern districts like Balaghat and Shahdol
(D) Nimar plains

55. Which soil type in eastern Madhya Pradesh is most conducive to the growth of Sal forests?
(A) Red and yellow soil
(B) Deep black cotton soil
(C) Alluvial soil
(D) Desert sandy soil

56. Which of the following best describes the climate of the eastern forest zone of Madhya Pradesh that supports its unique vegetation?
(A) Humid tropical climate with heavy monsoon showers.
(B) Arid climate with very low humidity.
(C) Semi-arid climate with distinct winter rainfall.
(D) Alpine climate with sub-zero winter temperatures.

57. What is the primary role of the Madhya Pradesh State Minor Forest Produce (Trading & Development) Co-operative Federation regarding Tendu leaves?
(A) To ensure a fair support price and eliminate middlemen in the trade.
(B) To ban the collection of tendu leaves to protect forests.
(C) To export unprocessed leaves strictly to foreign countries.
(D) To mandate the conversion of tendu leaves into organic fertilizer.

58. The effect of the Malwa plateau's climate on the western forest zone results in:
(A) Sparse vegetation dominated by drought-resistant species.
(B) The growth of broad-leaved evergreen trees.
(C) Intensive natural propagation of Sal trees.
(D) Year-round moisture retention in the soil.

59. Which species of bamboo is predominantly found in the forests of Madhya Pradesh?
(A) Bambusa tulda
(B) Melocanna baccifera
(C) Dendrocalamus strictus
(D) Bambusa balcooa

60. What is the primary ecological requirement for the healthy growth of Teak forests in Madhya Pradesh?
(A) Waterlogged and swampy soils
(B) Well-drained soils with a distinct dry season
(C) Continuous rainfall throughout the year
(D) Highly acidic soils in high-altitude regions

61. Which town in Madhya Pradesh houses a well-known Katha production factory?
(A) Pithampur (Dhar)
(B) Mandideep (Raisen)
(C) Banmore (Morena)
(D) Waidhan (Singrauli)

62. Which scheme was launched by the Madhya Pradesh government to distribute a portion of the profit earned from the trade of tendu leaves to the pluckers?
(A) Bonus Distribution Scheme
(B) Vanya Radio Scheme
(C) Charan Paduka Scheme
(D) Eklavya Education Scheme

Click Here to Buy book on Amazon

122. Which state-level body is responsible for the overall execution of the provisions of the Forest Rights Act in Madhya Pradesh?
(A) State Election Commission
(B) Madhya Pradesh Tourism Board
(C) Department of Urban Development
(D) Tribal Welfare Department

123. The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act was passed in which year?
(A) 1972
(B) 1980
(C) 2006
(D) 2014

124. The concept of 'Eco-development' in the context of Madhya Pradesh forests refers to:
(A) Systematically developing heavy industries and factories within ecological zones.
(B) Generating livelihood options for communities to reduce forest dependency.
(C) Constructing eco-friendly luxury resorts deep inside tiger reserves.
(D) Replacing native tree species with faster-growing commercial pines.

125. Consider the following administrative tiers of the Madhya Pradesh Forest Department:
I. Forest Circle
II. Forest Sub-division
III. Forest Division
IV. Forest Range
Which of the following represents the correct sequence in descending order (Highest to Lowest)?
(A) I, III, II, IV
(B) III, I, IV, II
(C) I, II, III, IV
(D) III, IV, II, I

126. Under the Forest Rights Act, what type of rights are primarily granted to eligible tribal populations in Madhya Pradesh?
(A) The right to hold forest land for habitation or self-cultivation.
(B) The legal right to hunt various endangered animals for traditional rituals.
(C) The right to clear-fell reserved forests to establish new industries.
(D) The right to sell national park lands to private developers.

127. Consider the following statements about biodiversity conservation in Madhya Pradesh:
I. Forests support critical gene pools of diverse flora and fauna.
II. In-situ conservation is primarily achieved through National Parks and Sanctuaries.
III. Ex-situ conservation in the state includes botanical gardens and zoos.
IV. Corridors connecting Tiger Reserves are crucial to prevent genetic isolation.
V. The state actively promotes the introduction of invasive exotic species to boost biodiversity.
Which of the above statement(s) is/are incorrect?
(A) V only
(B) III and V
(C) I and IV
(D) II, IV, and V

128. Which traditional practice among some tribal communities in Madhya Pradesh historically contributed to deforestation but has now been largely regulated or banned?
(A) Beekeeping
(B) Handloom weaving
(C) Terracotta pottery
(D) Dahia (Shifting cultivation)

129. What is a key objective of the Madhya Pradesh State Forest Policy of 2005?
(A) To increase revenue by rapidly extracting all mature timber.
(B) To ensure environmental stability and ecological balance through sustainable management.
(C) To convert 50% of reserved forests into agricultural zones to boost food production.
(D) To strictly prohibit tribal entry into all types of forests.

130. Match the following conservation initiatives in List I with their targeted subjects in Madhya Pradesh in List II:
List I: (Conservation Initiative)
P. Project Tiger
Q. Vulture Conservation Breeding Centre
R. Gharial Conservation
S. Cheetah Reintroduction
List II: (Targeted Subject)

Downloaded from www.pdf.tube

are collected during the summer months and are essential for the bidi industry, which is a major source of rural employment in the region. The state government regulates the collection and trade of these leaves through cooperatives to ensure fair wages and benefits for the tribal collectors.

46. (B) Ratapani Wildlife Sanctuary
Ratapani Wildlife Sanctuary is located in the Raisen district, amidst the forested hills of the Vindhyan range near Bhopal. It is known for its high biodiversity and serves as an important habitat for tigers and other wildlife. The sanctuary also contains prehistoric rock shelters, similar to those found in Bhimbetka, making it a site of both ecological and historical significance within the state.

47. (B) Bidi rolling
Tendu leaves are the primary raw material used for rolling bidis, a traditional Indian cigarette. Madhya Pradesh is the largest producer of Tendu leaves in the country, and the collection process provides seasonal employment to millions of tribal and rural people. The state government nationalized the trade of Tendu leaves to protect the collectors from exploitation and to ensure sustainable harvesting practices.

48. (B) It is a transition zone with a mix of dry and moist deciduous species.
The central forest zone of Madhya Pradesh acts as a transition area where the vegetation changes from the moist deciduous forests of the east to the drier deciduous forests of the west. It contains a diverse mix of tree species, including both Teak and various mixed deciduous trees. This zone experiences moderate rainfall and supports a wide range of wildlife within its extensive forest network.

49. (A) Grass
Botanically, bamboo is classified as a member of the grass family. However, for a long time, it was legally classified as a tree under Indian forest law, which restricted its harvest and transport. Recent legal amendments have reclassified it as grass when grown in non-forest areas, simplifying the process for farmers and tribal communities to cultivate, harvest, and sell bamboo for commercial purposes.

50. (A) I, II, III, IV
In terms of total forest cover area, Balaghat ranks the highest in Madhya Pradesh, followed by Chhindwara and then Betul. These southern districts benefit from high rainfall and rugged terrain. Ujjain, located in the agricultural plains of Malwa, has the lowest forest cover among them. Therefore, the correct descending order of their total forest area is Balaghat, Chhindwara, Betul, and finally Ujjain.

51. (D) Umaria
Umaria district is traditionally famous for housing a government-run lac processing factory. Lac is a natural resin collected from host trees in the surrounding forests by local communities. The factory in Umaria plays a crucial role in processing the raw lac into finished products, thereby supporting the local economy and ensuring a steady market for the forest produce gathered by tribal populations.

52. (D) Narmada
The Narmada River, often considered the lifeline of Madhya Pradesh, originates from the Amarkantak plateau in the eastern forest zone. The dense forests in its catchment area are vital for maintaining the river's flow and water quality. The river flows westward through the state, and its valley is home to diverse forest types and several important national parks and wildlife sanctuaries.

NODIA

53. (C) Tectona grandis
Tectona grandis is the botanical name for Teak, which is the most prominent and commercially valuable timber species in Madhya Pradesh. Teak forests are widely distributed across the state's central and southern regions. The timber is prized for its durability, resistance to termites, and aesthetic appeal. In contrast, Shorea robusta is the botanical name for Sal, and Diospyros melanoxylon is the Tendu tree.

54. (C) Southeastern districts like Balaghat and Shahdol
The southeastern districts of Madhya Pradesh, including Balaghat, Shahdol, and Mandla, are characterized by dense bamboo brakes, earning the region a reputation for its bamboo wealth. The high rainfall and suitable soil in these areas promote the natural growth of various bamboo

STUDYING FROM PDFs?

THINK AGAIN.

If you are studying only from PDFs,
you are wasting valuable time.

Research shows that learning from

PRINTED BOOKS has up to

4× HIGHER RETENTION

than studying from screens.

PRINT BOOK = BETTER MEMORY

PDF = LOWER RETENTION

Those who study from **PRINTED BOOKS**
move **AHEAD.**

Others are left **BEHIND**
in competition.

In competitive exams,
being average is not enough.

STAY ONE STEP AHEAD.

ANSWERS

1. (D) Reserved Forests
Reserved forests represent the highest category of legal forest protection in India. Within these designated areas, all human activities such as grazing, hunting, or timber collection are strictly prohibited unless specific permission is granted by the state government. They are managed under the Indian Forest Act to ensure long-term conservation of biodiversity and protection of critical wildlife habitats across the state.

2. (C) Chambal Valley and Northern plains
Tropical Thorn Forests are typically found in arid and semi-arid regions characterized by low annual rainfall. In Madhya Pradesh, these forests are primarily concentrated in the northern plains and the Chambal Valley, covering districts like Morena, Bhind, and Sheopur. The vegetation consists of drought-resistant, thorny species like Babul and Khair, which are specially adapted to survive the dry regional climate.

3. (B) 25.1 percent
According to the India State of Forest Report, the forest cover in Madhya Pradesh accounts for approximately twenty-five percent of its total geographical area. This figure reflects the actual land covered by trees and forests, which differs from the legally recorded forest area. The state maintains one of the largest proportions of forest cover among major Indian states, supporting diverse ecological systems.

4. (D) I, II, and III
Balaghat consistently ranks first in Madhya Pradesh for having the highest total area under forest cover and the highest percentage. Chhindwara follows as the district with the second-largest forest area. Conversely, Ujjain is recognized for having the lowest total forest cover and percentage in the state. These statistics highlight the uneven distribution of green cover across the various districts of the state.

5. (B) They exhibit dense lower canopies and retain moisture during dry seasons.
Tropical Moist Deciduous Forests are found in regions of higher rainfall in eastern Madhya Pradesh. Unlike dry forests, these areas have a denser lower canopy and better moisture retention capabilities during the dry summer months. Although trees shed their leaves seasonally to conserve water, the overall structure remains relatively green and lush compared to the more arid thorn or dry deciduous types.

6. (B) High average annual rainfall and favorable soil conditions.
The south-eastern districts of Madhya Pradesh benefit from high average annual rainfall, often exceeding one hundred and twenty-five centimeters. This climatic factor, combined with fertile red and yellow soils, provides ideal conditions for the growth of dense forests. These regions support robust stands of Sal and mixed species, contributing significantly to the high forest density and biodiversity found in the area.

7. (A) First
Madhya Pradesh occupies the first position among all Indian states in terms of absolute forest cover area. This status is documented in the biennial reports of the Forest Survey of India. The vast geographical extent of the state, combined with major mountain ranges like the Satpura and Vindhyan, allows for an extensive and diverse network of forest ecosystems and protected wildlife zones.

8. (B) They are geographically confined to the extreme northern districts like Bhind.
Tropical Dry Deciduous Forests are the most widespread forest type in Madhya Pradesh, covering over eighty percent of the forested area. While they undergo a leaf-shedding period in summer and include valuable teak, they are not geographically confined to the extreme northern districts. Instead, they are found throughout the central, southern, and western parts of the state in regions of moderate rainfall.

Click Here to Buy book on Amazon

1. Kuno National Park
2. Kanha National Park
3. Kerwa (Bhopal)
4. National Chambal Sanctuary

(A) P-2, Q-3, R-4, S-1
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-1, R-2, S-3
(D) P-2, Q-4, R-3, S-1

www.nodia.in

NODIA

18. (A) Systematic legal notification of lands into reserved or protected categories.
Unclassed forests represent the smallest legal category in Madhya Pradesh because the state has systematically notified most forest lands as either reserved or protected. This legal process ensures that the vast majority of forest area is under strict governmental control and management. Consequently, very little land remains in the unclassed category, where the legal status is often transitional or much less clearly defined.

19. (D) Stunted trees with deep root systems and thorny branches.
Vegetation in Tropical Thorn Forests is characterized by stunted trees with deep root systems and thorny branches, which are adaptations to arid environments. These features help the plants minimize water loss through transpiration and access deep groundwater during prolonged dry spells. Common species in these forests include Babul and Khair, which thrive in the low-rainfall regions of northern and western Madhya Pradesh.

20. (A) P-4, Q-3, R-2, S-1
Tropical Moist Deciduous forests are dominant in Mandla and Balaghat, while Dry Deciduous forests are prevalent in Hoshangabad and Betul. Tropical Thorn forests are concentrated in northern districts like Morena and Sheopur due to lower rainfall. Sub-tropical Hill forests are unique to high-altitude areas like Pachmarhi. This classification reflects the climatic and topographical diversity present across the landscape of Madhya Pradesh.

21. (C) Open scrub and dry deciduous forests.
The northern hill forests of the Vindhyan range are predominantly characterized by open scrub and dry deciduous vegetation. Due to lower annual rainfall and the rocky nature of the terrain, these forests are less dense than those in the south. Common species include various types of mixed deciduous trees and thorny shrubs that are well-adapted to the hot and dry summer months.

22. (B) Unclassed forests constitute the largest proportion of the total forest area in the state.
In Madhya Pradesh, unclassed forests actually constitute the smallest proportion of the total forest area. Reserved forests make up the largest share, followed by protected forests. Reserved forests enjoy the highest degree of legal protection, while protected forests allow local communities certain limited rights. This legal structure is designed to prioritize the long-term conservation of the state's valuable timber and wildlife resources.

23. (D) Sal
Sal is the dominant tree species found in the Tropical Moist Deciduous Forests of eastern Madhya Pradesh. It is highly valued for its durable timber, which is resistant to termites and decay. These forests thrive in the high-rainfall zones of districts like Mandla, Balaghat, and Shahdol. Sal forests are ecologically significant and provide essential non-timber forest produce for the local tribal populations.

24. (A) Both Statement I and Statement II are correct.
Mixed forests are widely distributed throughout Madhya Pradesh and serve as a vital source of fuelwood and minor forest produce for local communities. These forests are characterized by a variety of species where no single tree dominates the canopy. Prominent components of these forests include Saja, Dhaora, and Tendu, which are economically and ecologically important across the central Indian landscape.

25. (B) Low and erratic rainfall, often less than 75 cm annually.
Tropical Thorn Forests in Madhya Pradesh are a direct result of the semi-arid climate prevalent in the northern and western regions. These areas receive low and erratic annual rainfall, typically measuring less than seventy-five centimeters. Such dry conditions prevent the growth of dense forests, instead favoring stunted, thorny vegetation that possesses deep root systems and small leaves to effectively minimize moisture loss.

26. (D) Geographic areas legally recorded as forests in government records.
Total recorded forest area refers to all geographic areas that are legally classified as forests in government records, such as the state forest department. This includes reserved, protected, and unclassed forests. It is important to distinguish this from 'forest cover', which

Downloaded from www.pdf.tube

supplementary income for forest-dependent populations during the summer season.

64. (A) P-1, Q-2, R-4, S-3
Bandhavgarh National Park is famous for having the highest density of tigers in India. Pench National Park provided the setting that inspired Rudyard Kipling's classic, The Jungle Book. Satpura National Park encompasses the rugged terrain of the Pachmarhi region, while Madhav National Park is situated in Shivpuri. These protected areas are crucial for preserving the state's rich biodiversity and natural heritage.

65. (A) To prevent the exploitation of tribal gatherers and ensure fair wages.
The state government establishes a Minimum Support Price (MSP) for specific Minor Forest Produces to protect tribal gatherers from being exploited by private traders and middlemen. By guaranteeing a fair price for their collected items, the government ensures that these communities receive a stable income. this policy also helps in organizing the market and promoting the sustainable harvest of forest resources.

66. (A) Gharial (Gavialis gangeticus)
The National Chambal Sanctuary was established along the Chambal River to protect the critically endangered Gharial, a unique species of crocodile. The sanctuary provides a safe habitat for the breeding and survival of these reptiles. Besides gharials, the sanctuary is also home to the endangered Ganges River Dolphin and various species of migratory birds, making it a vital wetland ecosystem in northern India.

67. (C) Major lac producing zone - Southeastern districts like Seoni, Mandla, Balaghat
The major lac-producing zone in Madhya Pradesh is located in the southeastern districts, including Seoni, Mandla, and Balaghat. These areas have an abundance of host trees like Palash and Kusum, which are essential for the lac insect. Tribal communities in these districts have traditionally been involved in the collection and primary processing of lac, which is then sent to factories for further refinement.

68. (B) Chlorophytum borivilianum
Chlorophytum borivilianum, commonly known as 'White Musli', is a highly valued medicinal plant that grows naturally in the forests of Madhya Pradesh. It is prized in traditional medicine for its rejuvenating and health-promoting properties. Due to its high commercial demand, both in domestic and international markets, the sustainable collection and cultivation of White Musli provide significant economic opportunities for local tribal populations.

NODIA

69. (A) MP State Minor Forest Produce Federation
The 'Vindhya Herbals' brand is an initiative of the Madhya Pradesh State Minor Forest Produce Federation. It aims to promote and market forest-based medicinal and aromatic products collected by tribal communities. By providing guidance on quality control, processing, and branding, the federation helps these communities add value to their produce and reach a wider market, thereby improving their overall socio-economic status.

70. (C) Non-timber forest produce including bamboo, brushwood, canes, and honey.
Minor Forest Produce (MFP) in Madhya Pradesh includes a wide variety of non-timber items gathered from the forests. This category encompasses products like bamboo, honey, waxes, medicinal plants, fruits, and seeds. MFPs are vital for the livelihoods of tribal communities, and their collection and trade are regulated to ensure both ecological sustainability and fair economic returns for the people living in forest areas.

71. (A) Ralamandal
Ralamandal Wildlife Sanctuary, located near Indore, is the smallest wildlife sanctuary in Madhya Pradesh by area. Despite its small size, it serves as an important green lung for the city and a center for environmental education. It provides a habitat for various species of deer, birds, and small mammals, and its proximity to an urban center makes it a popular destination for visitors.

72. (B) I, II, and IV
In Madhya Pradesh, Teak is the leading revenue generator among all timber species. Timber logging in reserved forests is strictly managed under detailed working plans to ensure sustainability. Furthermore, state forest depots serve as the primary nodal points for the auction and sale of timber. Private contractors do not own the land; instead, they are granted limited

36. (A) Pine
Lac production in Madhya Pradesh depends on specific host trees where the lac insect survives and secretes the resin. Common host trees include Palash, Kusum, and Ber, which are found in the state's tropical and subtropical forests. Pine trees are temperate conifers and do not serve as hosts for the lac insect in this region, making them an exception in lac cultivation.

37. (A) Satpura forests receive higher rainfall and support denser moist vegetation.
The forests of the Satpura range generally receive higher annual rainfall compared to the northern Vindhyan range. This moisture allows for the growth of denser and more diverse vegetation, including significant stands of moist deciduous forests. The northern Vindhyan forests, situated in a drier climatic zone, are more open and dominated by dry deciduous species and scrub, reflecting the regional variation in precipitation.

38. (D) Shorea robusta
Shorea robusta is the botanical name of the Sal tree, which is found abundantly in the eastern districts of Madhya Pradesh. It is a large, slow-growing tree valued for its hard and durable timber. Sal forests are ecologically significant in the Maikal and Baghelkhand regions. In contrast, Tectona grandis is the botanical name for Teak, which is more common in the southern regions.

39. (D) Paper and pulp industry
Bamboo extracted from the forests of Madhya Pradesh is a vital raw material for the paper and pulp industry. Several paper mills in the region rely on the consistent supply of bamboo due to its long fibers, which are ideal for paper manufacturing. Additionally, bamboo is used extensively in the local economy for construction, basketry, and making various traditional handicrafts by tribal communities.

40. (D) Bhind
Bhind is located in the northernmost part of Madhya Pradesh and is characterized by low forest cover and extensive agricultural plains. In contrast, districts like Sehore, Raisen, and Hoshangabad are part of the heavily forested central zone, which includes parts of the Vindhyan and Satpura ranges. Bhind's landscape is dominated by the Chambal ravines and open scrub, rather than dense deciduous forests.

41. (B) A scale insect
Lac is a natural resinous substance produced as a secretion by a tiny scale insect known as Laccifer lacca. These insects infest specific host trees like Palash and Kusum, common in the forests of Madhya Pradesh. The resin is collected by tribal communities and processed for various industrial uses, including the manufacturing of bangles, sealing wax, and varnishes, providing important forest-based income.

42. (A) Both A and R are true and R is the correct explanation of A.
The eastern districts of Madhya Pradesh, including Dindori and Mandla, are home to significant tribal populations who have traditionally lived in close proximity to forests. These areas are covered with dense Sal and mixed forests that yield abundant non-timber forest produce such as Mahua, Tendu leaves, and Sal seeds. These resources are essential for providing livelihood, food, and medicinal needs to the communities.

43. (B) They constitute the largest share of forest cover, exceeding teak forests.
Sal forests are primarily concentrated in the eastern districts of Madhya Pradesh, such as Mandla and Balaghat. While Sal is a highly durable timber and its seeds are valuable for oil extraction, it does not constitute the largest share of forest cover in the state. Teak and mixed deciduous forests actually occupy a much larger percentage of the total forested area within Madhya Pradesh's landscape.

44. (D) Hoshangabad
The Bori Wildlife Sanctuary in Hoshangabad district is famous for producing some of the highest quality teak timber in India, often referred to as 'Bori Teak'. This timber is highly sought after for its strength, grain, and durability. The favorable environmental conditions in the Satpura range contribute to the superior growth of teak in this region, making it a major revenue source.

45. (C) Sagar
Sagar district is one of the leading producers of Tendu leaves in Madhya Pradesh. Tendu leaves

Click Here to Buy book on Amazon

9. (B) Pine
Saja, Tendu, and Mahua are common indigenous species found throughout the mixed deciduous forests of Madhya Pradesh. Pine is a temperate coniferous tree and is not a natural component of the tropical and subtropical forests of this central Indian state. Mixed forests are defined by a variety of species where no single tree dominates the entire canopy layer, unlike pure teak stands.

10. (C) 100 cm to 150 cm
Tropical Moist Deciduous Forests thrive in regions with an average annual rainfall between one hundred and one hundred and fifty centimeters. In Madhya Pradesh, such conditions are primarily found in the eastern districts. This specific moisture regime supports the growth of Sal trees and other species that require more humidity than the widely distributed dry deciduous or thorn forest types found elsewhere.

11. (D) Teak
Teak is the most prominent and commercially valuable timber species found in the southern parts of Madhya Pradesh, especially within the Satpura range. Districts like Hoshangabad and Betul are famous for their extensive teak forests, which thrive in the well-drained soils of these hilly terrains. Teak forests contribute significantly to the state's revenue and support a large timber processing industry.

12. (C) Reserved, Protected, and Unclassed forests
Based on legal status, forests in Madhya Pradesh are primarily classified into Reserved, Protected, and Unclassed categories. Reserved forests enjoy the highest protection, while protected forests allow limited rights to local communities. Unclassed forests are those that have not yet been categorized into either of the two. This legal framework is essential for the systematic management and conservation of state forest resources.

13. (A) Sal
Tropical Thorn Forests in Madhya Pradesh are characterized by xerophytic vegetation such as Babul, Khair, and Palash, which are adapted to arid conditions. Sal trees, however, require higher rainfall and moist environments, making them characteristic of the moist deciduous forests in the eastern districts. Therefore, Sal is not naturally found in the dry, thorny landscapes of the northern plains of the state.

14. (C) Tropical Dry Deciduous Forests
Tropical Dry Deciduous Forests cover the largest geographical area within the forest network of Madhya Pradesh. These forests thrive in regions with moderate rainfall and are dominated by species like Teak and various mixed deciduous trees. They are widely distributed across the state, characterized by a distinct period where trees shed their leaves to survive the dry summer months effectively and efficiently.

15. (D) Lowest absolute forest area - Ujjain
In Madhya Pradesh, the distribution of forest cover varies significantly between districts. Ujjain has the distinction of having the lowest absolute forest area as well as the lowest percentage of forest cover in the state. In contrast, Balaghat possesses the highest absolute forest area and percentage. These figures are essential for understanding regional ecological imbalances and planning future afforestation efforts across the state.

16. (A) It holds the largest absolute forest cover area among all states in India.
Madhya Pradesh consistently holds the largest absolute forest cover area in India, as per the India State of Forest Reports. While other states might have a higher percentage of their land under forests, the total square kilometers of forest in Madhya Pradesh remain the highest. This vast green expanse is crucial for biodiversity conservation, carbon sequestration, and supporting the livelihoods of tribal communities.

17. (A) The Bundelkhand plateau
The Bundelkhand plateau region in Madhya Pradesh is characterized by extensive patches of mixed deciduous forests. Unlike the eastern regions dominated by Sal or the southern belts famous for pure Teak, this area features a diverse combination of species such as Saja, Tendu, and Dhawda. The vegetation here is adapted to the semi-arid climate and rocky terrain typical of the northern plateau.

NODIA

species. Bamboo is an essential resource for the paper industry and is used extensively by local tribal communities for various traditional purposes.

55. (A) Red and yellow soil
Red and yellow soils, predominantly found in the eastern part of Madhya Pradesh, are highly conducive to the growth of Sal forests. These soils are well-suited for Shorea robusta as they provide the necessary drainage and nutrient profile required by the species. The combination of these soils and the high annual rainfall in the region supports the extensive and healthy Sal stands found there.

56. (A) Humid tropical climate with heavy monsoon showers.
The eastern forest zone of Madhya Pradesh experiences a humid tropical climate characterized by heavy monsoon showers. This high moisture level is the primary factor supporting the growth of moist deciduous forests, dominated by Sal trees. The humid conditions during the growing season allow for denser vegetation and a higher level of biodiversity compared to the drier central and western parts of the state.

57. (A) To ensure a fair support price and eliminate middlemen in the trade.
The Madhya Pradesh State Minor Forest Produce Federation was established to organize the collection and trade of nationalized forest produce like Tendu leaves. Its primary goal is to protect tribal collectors from exploitation by middlemen and to ensure they receive a fair minimum support price. The federation also returns a portion of the profits to the primary collectors as bonuses, supporting rural livelihoods.

58. (A) Sparse vegetation dominated by drought-resistant species.
The climate of the Malwa plateau, which is characterized by moderate to low rainfall and high summer temperatures, results in sparse vegetation in the western forest zone. The forests here are dominated by drought-resistant species like thorny shrubs and dry deciduous trees. These plants have adapted to survive with limited water, often featuring small leaves or thorns to reduce moisture loss during the hot months.

59. (C) Dendrocalamus strictus
Dendrocalamus strictus, commonly known as the 'Male Bamboo' or 'Solid Bamboo', is the most predominant species of bamboo found in the forests of Madhya Pradesh. It is a hardy, versatile species used extensively in the paper industry and for various local construction and craft purposes. This species thrives in the varied climatic conditions of the state, from the dry hills to more moist valleys.

60. (B) Well-drained soils with a distinct dry season
Teak forests in Madhya Pradesh require well-drained soils and a climate with a distinct dry season to grow effectively. Teak does not tolerate waterlogging, which is why it is often found on slopes and in hilly terrains like the Satpura and Vindhyan ranges. The seasonal shedding of leaves during the dry period is a natural adaptation that helps the tree conserve water and survive.

61. (C) Banmore (Morena)
Banmore, located in the Morena district, is well-known for housing a major factory that produces katha from the wood of the Khair tree (Acacia catechu). The northern plains of Madhya Pradesh have a significant population of Khair trees, making the region a suitable hub for this industry. Katha is an essential ingredient in the preparation of traditional betel leaves consumed across India.

NODIA

62. (A) Bonus Distribution Scheme
The Madhya Pradesh government launched the Bonus Distribution Scheme to ensure that tribal and rural collectors of Tendu leaves receive a direct share of the profits earned from the trade. Under this scheme, the net profit from the sale of leaves is distributed back to the primary collectors, providing them with additional income and encouraging the sustainable collection of forest produce.

63. (A) Seeds
The seeds of the Mahua tree, known as 'Dori', are collected by tribal communities in Madhya Pradesh to extract oil. This oil is a versatile resource used for cooking, lighting lamps, and even for making traditional soaps. While Mahua flowers are used for food and brewing liquor, the seeds provide a crucial source of fats and

refers to land with tree canopy density above a certain threshold, regardless of its legal status or ownership in the records.

27. (A) Balaghat
Based on the percentage of geographical area, Balaghat has the maximum forest cover in Madhya Pradesh. Over half of the district's total land area is covered by forests, making it the greenest district in the state. This high density is due to favorable rainfall and the presence of both Sal and Teak forests, which are managed extensively for conservation and timber production.

28. (A) Balaghat
Balaghat is prominently known for its dense Tropical Moist Deciduous Forests. The district receives significant rainfall, which supports the growth of moisture-loving species like Sal and various mixed deciduous trees. These forests are vital for the regional ecosystem and provide a wealth of forest produce. Balaghat consistently records some of the highest forest density and biodiversity figures within the state of Madhya Pradesh.

29. (C) Forests where no single tree species dominates the canopy.
Mixed forests in Madhya Pradesh are defined as forest tracts where no single tree species, such as Teak or Sal, dominates the canopy layer. Instead, these areas consist of a diverse variety of species including Saja, Tendu, Dhaora, and Mahua. This diversity makes mixed forests highly resilient and essential sources of various non-timber forest products that support the livelihoods of local communities.

30. (D) Teak - Tropical Dry Deciduous Forest
Teak is the primary tree species found in the Tropical Dry Deciduous Forests, which cover the largest portion of Madhya Pradesh. These forests are adapted to regions with moderate rainfall and a distinct dry season. In contrast, Sal is found in moist deciduous forests, Babul in thorn forests, and bamboo is found across various types but is not an alpine species in this region.

31. (C) Highly degraded thorn and scrub forests
The western forest zone of Madhya Pradesh, including districts like Jhabua and Alirajpur, is primarily characterized by highly degraded thorn and scrub forests. This region has historically faced high biotic pressure and receives relatively low rainfall. As a result, the natural vegetation is sparse and consists mainly of hardy, thorny species and bushes, reflecting a more arid and disturbed ecological environment.

32. (B) Mandla
The Sal Borer is a destructive insect that can cause widespread damage to Sal forests. In the late 1990s, a major epidemic of Sal borer occurred in the Mandla district of Madhya Pradesh, leading to the death of millions of trees. This event necessitated massive salvage logging and highlighted the vulnerability of monoculture-like stands to specialized pests within the state's eastern forest belt.

33. (B) Pure Sal forests
The eastern forest zone of Madhya Pradesh, encompassing districts like Balaghat and Mandla, is famous for its extensive and nearly pure stands of Sal forests. These forests thrive in the high-rainfall conditions and red-yellow soils of the region. Sal is a highly valuable timber species, and these eastern districts represent the core area of its distribution within the state's diverse forest landscape.

34. (A) P-2, Q-4, R-1, S-3
Tendu leaves are the primary raw material for the bidi-making industry, providing livelihood to millions. Khair wood is specifically processed to produce katha, used in betel leaves. Sal seeds are a valuable source for oil extraction, particularly in the eastern districts. Lac, secreted by insects, is used for sealing wax and bangles. These products represent vital non-timber resources for the state.

35. (C) 19 percent
Teak is one of the most prominent and commercially important timber species in Madhya Pradesh. It accounts for approximately nineteen percent of the total forested area in the state. These forests are mainly concentrated in the central and southern regions, including districts like Hoshangabad and Betul, where the soil and climate are highly conducive to the growth of high-quality teak timber.

Downloaded from www.pdf.tube

harvesting rights under strict government supervision.

73. (D) It provides supplementary income and food security during lean agricultural periods.
The seasonal collection of Non-Timber Forest Produce (NTFP) plays a critical role in the tribal economy of Madhya Pradesh. It provides a vital source of supplementary income and food security, especially during the months when agricultural activities are minimal. By gathering items like Mahua, Tendu leaves, and medicinal herbs, tribal families can sustain themselves through lean periods and meet their basic economic needs.

74. (C) Amla
Amla, or the Indian Gooseberry, is a prominent medicinal plant found in the forests of Madhya Pradesh and is a key ingredient in the traditional herbal formulation Triphala. It is highly valued for its high Vitamin C content and various health benefits. The collection and processing of Amla fruits provide important seasonal employment for rural and tribal communities, contributing to the state's medicinal plant trade.

75. (D) Nauradehi is the largest wildlife sanctuary in the state.
Nauradehi Wildlife Sanctuary, spanning across Sagar, Damoh, and Narsinghpur districts, is the largest wildlife sanctuary in Madhya Pradesh by area. In contrast, Ralamandal is the smallest. Other sanctuaries like Ghatigaon and Karera were established to protect specific bird species like the Son Chiriya, rather than larger mammals like the Bengal tiger or rhinoceros. Proper management of these areas is vital for biodiversity conservation.

76. (D) Its flowers and seeds provide food, oil, and traditional liquor ingredients.
Mahua (Madhuca indica) is of immense significance to the tribal populations of Madhya Pradesh because almost every part of the tree is useful. Its sugary flowers are used for food and brewing traditional liquor, while the seeds provide oil for cooking and lighting. The tree is deeply integrated into the cultural and economic life of the tribes, providing essential resources throughout the year.

77. (D) Cervus duvaucelii branderi
The Hard Ground Swamp Deer, known as Barasingha (Cervus duvaucelii branderi), is an endemic and endangered subspecies found exclusively in Kanha National Park. Through successful conservation efforts, its population was saved from the brink of extinction. The Barasingha is the state animal of Madhya Pradesh and represents a major success story in wildlife management and habitat restoration within the state's protected area network.

78. (D) Narmada valley and Satpura ranges
The forest-based plywood industry in Madhya Pradesh primarily sources its timber from the Narmada valley and the Satpura ranges. These regions are home to extensive forests of Teak and other suitable hardwood species that are essential for plywood manufacturing. The availability of raw materials in these areas has led to the establishment of several processing units, contributing significantly to the state's industrial sector.

79. (B) Paper manufacturing using bamboo is considered a micro-scale cottage industry.
While bidi rolling and bamboo weaving are major forest-based cottage industries in Madhya Pradesh, paper manufacturing using bamboo is typically a large-scale industrial operation rather than a micro-scale cottage industry. Large paper mills in the state utilize significant quantities of bamboo to produce pulp and paper. Cottage industries, on the other hand, usually involve manual labor and traditional skills at the village level.

NODIA

80. (A) I, II, III, and IV only
Tendu leaves, Sal seeds, and Mahua flowers are essential non-timber forest products that support the rural and tribal economies of Madhya Pradesh. The state is also a leading producer of lac. While the government regulates certain species, it does not prohibit the commercial sale of all medicinal plants; instead, it promotes sustainable harvesting and marketing through various cooperatives and state-led forest department initiatives.

81. (C) Kuno National Park
Kuno National Park recently gained international fame for the successful reintroduction of African Cheetahs, a species that had been extinct in

Divisions. Each Forest Division is headed by a Divisional Forest Officer (DFO). This structured management system ensures clear lines of authority and efficient execution of forest policies.

100. (C) Encroachment for agricultural expansion and illicit felling for timber.
The primary causes of deforestation in the heavily populated central districts of Madhya Pradesh include the encroachment of forest land for agricultural expansion and the illicit felling of trees for timber. As the human population grows, the demand for more farmland and construction material increases, leading to the gradual loss of forest cover. Addressing these socio-economic issues is essential for long-term forest conservation.

101. (B) III only
Madhya Pradesh formulated its first forest policy in 1952, which was later replaced by the current State Forest Policy in 2005. This modern policy strongly emphasizes the participation of local communities through Joint Forest Management to ensure sustainable conservation. It did not abolish JFM; instead, it integrated the concept more deeply into the management strategy to effectively balance ecological needs with regional livelihoods.

102. (A) Panna - Bandhavgarh - Kanha - Pench
Geographically, the Tiger Reserves in Madhya Pradesh are distributed from north to south starting with Panna in the northern Vindhyan hills. Moving southward, Bandhavgarh is located in the Baghelkhand region, followed by Kanha in the eastern Maikal range. Pench is the southernmost reserve, situated on the border with Maharashtra. This sequence reflects the north-south ecological corridor across the diverse state landscape.

103. (B) A share in the revenue from the sale of various forest produce.
Under the Joint Forest Management (JFM) program, local communities that participate in forest protection are typically compensated with a share of the revenue generated from the sale of timber and other forest produce. This economic incentive encourages communities to prevent illegal logging and fires. This partnership ensures that the people living near forests have a direct stake in their health and productivity.

104. (D) Van Mahotsav
Van Mahotsav is the annual tree-planting festival observed in Madhya Pradesh and across India to promote afforestation and environmental awareness. During this festival, various government departments, educational institutions, and citizens participate in planting millions of saplings. The initiative aims to increase the green cover, combat climate change, and sensitize the public about the vital importance of trees for a healthy ecosystem.

105. (C) Anthropogenic activities like campfires and collection of forest produce.
Most forest fires in Madhya Pradesh are caused by human activities rather than natural events. Common causes include campfires left unattended, the clearing of forest floor using fire for the collection of Mahua flowers, or discarded cigarette butts. These anthropogenic factors are particularly dangerous during the dry summer months when the forest litter is highly flammable, necessitating constant vigil by forest department staff.

106. (B) Madhav
While Kanha, Panna, and Bandhavgarh are prominent Tiger Reserves in Madhya Pradesh, Madhav National Park is not currently designated as a Tiger Reserve. Although it was once a hunting ground for royalty and hosts a variety of wildlife, its management focuses on being a National Park. Efforts have been discussed for reintroducing tigers to Madhav, but it remains distinct from the state's existing Tiger Reserve network.

107. (A) They moderate summer temperatures, induce local rainfall, and prevent soil erosion.
The dense forests of the Satpura and Maikal ranges significantly influence the regional climate by moderating summer temperatures through transpiration and shade. They also play a role in inducing localized rainfall by maintaining high humidity levels. Furthermore, the root systems of trees in these hilly regions are essential for binding the soil and preventing erosion, thereby protecting the Narmada and Tapti river catchments.

Click Here to Buy book on Amazon

use of these resources and works toward the scientific documentation of traditional medicinal knowledge.

91. (A) Pachmarhi Biosphere Reserve
Pachmarhi Biosphere Reserve was the first to be established in Madhya Pradesh, encompassing the unique landscape of the Satpura range. It is known for its high level of endemism and diverse flora and fauna, ranging from tropical to subtropical species. The reserve's high peaks and deep gorges provide a refuge for many endangered species and serve as a vital area for ecological research.

92. (C) 73rd Amendment
The 73rd Constitutional Amendment Act, which introduced the Panchayati Raj system, provided the legal framework for decentralized governance in India. In Madhya Pradesh, this influenced the structure of Joint Forest Management by empowering local village-level committees to participate in forest conservation and management. This approach ensures that local communities have a direct role and stake in protecting their surrounding natural resources.

93. (B) 1973
Project Tiger was launched in India in 1973 to protect the declining tiger population, and Kanha National Park was one of the first areas in Madhya Pradesh to be included. This initiative led to stricter protection measures, habitat management, and a focus on tiger conservation. Over the decades, Kanha has become a model for successful tiger management and a major destination for wildlife tourism.

94. (A) P-1, Q-3, R-2, S-4
The Narmada River originates from the Amarkantak and Maikal ranges, which are covered with dense forests. The Chambal River's catchment includes the Janapav hills in the Vindhyan scarps. The Betwa River flows through the forested regions of the Vindhyan range near Bhopal and Raisen. The Son River drains the eastern Baghelkhand and Amarkantak areas, highlighting the importance of forests for regional hydrology.

95. (B) Green live trees, specifically Sal and Teak.
To combat deforestation and protect the state's valuable forest cover, the Madhya Pradesh government has implemented a legal ban on the felling of green live trees, especially Sal and Teak, without special permission. This measure is intended to ensure that timber extraction is done sustainably and only under approved working plans. Protecting these slow-growing species is crucial for maintaining ecological balance.

96. (B) Satellite imagery and thermal mapping from the Forest Survey of India.
The Madhya Pradesh Forest Department modernizes its fire prevention efforts by utilizing real-time satellite imagery and thermal mapping provided by the Forest Survey of India. These alerts help forest officials identify the exact location of forest fires quickly, allowing for a rapid response to prevent the spread of flames. This technology is vital for protecting large and remote forest tracts during the dry summer.

NODIA

97. (D) Project Tiger
The Tiger Reserves in Madhya Pradesh are managed under the national Project Tiger initiative, which provides funding and guidelines for the conservation of Bengal tigers and their habitats. This program focuses on a core-buffer management strategy, where the core area is strictly protected from human interference while the buffer zone allows for sustainable community engagement. This approach has helped Madhya Pradesh maintain a high tiger population.

98. (A) Village Forest Committee
In the context of Joint Forest Management (JFM) in Madhya Pradesh, VFC stands for Village Forest Committee. These committees are formed at the local level to partner with the Forest Department in the protection and management of nearby forest areas. By involving the local population, the government ensures that conservation efforts are more effective and that communities benefit from the sustainable use of forest resources.

99. (B) Conservator of Forests - Heads a Forest Circle
In the administrative hierarchy of the Madhya Pradesh Forest Department, a Conservator of Forests is the officer in charge of a Forest Circle. A Forest Circle is a major administrative unit that typically encompasses several Forest

P. Vindhya Range
Q. Satpura Range
R. Maikal Hills
S. Kaimur Hills

List II: (Characteristic/Location)

1. Divides Son and Tons river systems
2. Located between Narmada and Tapti rivers
3. Forms northern escarpment of Narmada valley
4. Crescent-shaped eastern extension of Satpura

(A) P-3, Q-2, R-4, S-1
(B) P-2, Q-3, R-1, S-4
(C) P-3, Q-2, R-1, S-4
(D) P-2, Q-3, R-4, S-1

22. Which of the following is an incorrect statement regarding the Chambal River?
(A) It originates from the Janapav Hill near Mhow in the Indore district
(B) It forms a natural boundary between Madhya Pradesh and Maharashtra
(C) It flows predominantly in a northward direction towards the Yamuna river
(D) It is notorious for extensive ravine erosion in the Chambal valley region

23. Which of the following best describes the drainage direction of the Son River immediately after its origin?
(A) It flows eastwards directly into the Bay of Bengal
(B) It flows westwards into the Arabian Sea
(C) It flows southwards to join the Godavari basin
(D) It flows northwards before turning eastwards

24. The Vindhya Range stretches across Madhya Pradesh predominantly in which direction?
(A) North to South
(B) Northeast to Southwest
(C) East to West
(D) Northwest to Southeast

25. The Kshipra River holds immense religious significance due to the Simhastha Kumbh Mela held on its banks. In which district does this river originate?
(A) Ujjain
(B) Indore
(C) Dewas
(D) Dhar

26. The structural formation of the Narmada valley makes it flow through a specific geological feature. What is the primary consequence of this structural flow on its mouth?
(A) It forms the largest delta in the Arabian Sea
(B) It splits into distributaries before entering the sea
(C) It sinks into the coastal sands
(D) It forms an estuary rather than a delta

27. Which of the following statements correctly differentiates the Satpura Range from the Vindhya Range?
(A) Higher average elevation and distinct peaks
(B) Younger in geological age and tectonic structure
(C) Composed entirely of crystalline granitic rocks
(D) Located north of the Narmada rift valley zone

28. The Son River, a major southern tributary of the Ganga, originates from which of the following locations?
(A) Amarkantak Plateau
(B) Mahadeo Hills
(C) Kaimur Range
(D) Rajpipla Hills

29. Which river basin in Madhya Pradesh is characterized by the highest agricultural productivity due to the presence of deep black soil?
(A) Chambal Basin
(B) Wainganga Basin
(C) Narmada Basin
(D) Son Basin

30. The Wainganga River originates in the Seoni district of Madhya Pradesh. Which major river system does it eventually join?
(A) Ganga system
(B) Mahanadi system
(C) Narmada system
(D) Godavari system

31. The Bundelkhand Plateau is characterized geologically by the presence of which ancient rock types?

Downloaded from www.pdf.tube

108. (A) Chhattisgarh
The Achanakmar-Amarkantak Biosphere Reserve is a transboundary protected area shared between Madhya Pradesh and Chhattisgarh. It encompasses the Amarkantak plateau, where the Narmada and Son rivers originate. The reserve is characterized by its high biological diversity and is home to several tribal communities whose livelihoods are closely linked to the forest. Its conservation is a collaborative effort between the two neighboring states.

109. (A) Both A and R are true and R is the correct explanation of A.
Joint Forest Management (JFM) has been successful in regenerating degraded forest lands because it empowers local communities by giving them a direct economic stake in conservation. When people benefit from the sustainable use of forest resources and receive a share of the revenue, they are more likely to protect the forest from illegal activities. This collaborative approach has transformed forest management in Madhya Pradesh.

110. (B) II only
The Panchvan Yojana is an important afforestation scheme targeting districts where forest cover is below the national average. Compensatory afforestation is a legal requirement whenever forest land is diverted for industrial or developmental projects. Social forestry programs in the state actively encourage the participation of local farmers and communities in planting trees on non-forest lands to increase the overall green cover and meet local needs.

111. (D) Expansion of agricultural land by landless populations for livelihood.
Forest encroachment in Madhya Pradesh is primarily driven by socio-economic factors, especially the need for agricultural land among landless populations. As families seek a source of livelihood and food security, they may clear small patches of forest for cultivation. This issue presents a significant challenge for forest management, requiring a balance between the enforcement of conservation laws and the provision of sustainable livelihood alternatives.

112. (C) Three
There are currently three recognized Biosphere Reserves in Madhya Pradesh: Pachmarhi, Achanakmar-Amarkantak, and Panna. These reserves are designated to protect entire ecosystems and promote sustainable development alongside conservation. They serve as important sites for scientific research, monitoring, and educational activities. The inclusion of Panna as the third biosphere reserve reflects the state's ongoing commitment to preserving its diverse natural landscapes and heritage.

113. (C) Major hydroelectric and irrigation dam projects such as Narmada Sagar.
Large-scale hydroelectric and irrigation projects, such as the Narmada Sagar Dam, have historically led to the submergence of significant forest areas in Madhya Pradesh. While these projects provide water and power, they also result in the loss of habitat and biodiversity. The government addresses this through compensatory afforestation, where an equivalent area of land is planted with trees to mitigate the environmental impact of the forest loss.

114. (B) The highest-ranking forest officer and administrative head of the state department.
The Principal Chief Conservator of Forests (PCCF) is the highest-ranking officer in the Madhya Pradesh Forest Department. As the administrative head, the PCCF is responsible for the overall management, planning, and execution of forest policies within the state. This position involves overseeing wildlife conservation, timber management, and community engagement programs, serving as the primary advisor to the state government on all forest-related matters.

NODIA

115. (D) Partnership between the state forest department and local communities.
The core philosophy of Joint Forest Management (JFM) in Madhya Pradesh is to create a partnership between the state forest department and local communities living near forests. This approach recognizes that conservation is more effective when local people are involved and their livelihoods are considered. By sharing the responsibility and benefits of forest management, the program aims to achieve both ecological sustainability and socio-economic development.

116. (D) It has the highest tiger population in India, retaining the 'Tiger State' status.
According to recent official estimations, Madhya Pradesh has the highest tiger population among all Indian states, allowing it to retain the prestigious 'Tiger State' status. This achievement is the result of dedicated conservation efforts, effective management of protected areas, and the state's vast forest network. The high number of tigers in reserves like Kanha, Bandhavgarh, and Pench highlights Madhya Pradesh's leadership in wildlife preservation.

117. (B) Summer (March to June)
The summer season, from March to June, experiences the highest incidence of forest fires in Madhya Pradesh. During this period, extreme heat and lack of humidity make the forest floor litter, such as dry leaves and twigs, highly flammable. High winds can also quickly spread small fires into large-scale infernos. This is the time when the forest department remains on maximum alert for detection and suppression.

118. (D) Severe deforestation, habitat fragmentation, and soil degradation.
Large-scale open-cast coal mining in the Singrauli region has had a significant negative impact on the local environment, leading to severe deforestation and habitat fragmentation. The removal of topsoil and vegetation for mining disrupts the local ecology and causes long-term soil degradation. These activities also affect groundwater levels and local air quality, posing challenges for the reclamation and restoration of these formerly forested landscapes.

119. (A) Forest Circle
In the administrative structure of the Madhya Pradesh Forest Department, the Forest Circle is the highest administrative unit. Each circle is overseen by a Conservator or Chief Conservator of Forests and is composed of several Forest Divisions. This hierarchical organization allows for the effective implementation of state-wide forest policies while providing sufficient localized management for the state's vast and diverse forest resources and wildlife sanctuaries.

120. (A) Namami Devi Narmade (Narmada Seva Yatra)
The Namami Devi Narmade or Narmada Seva Yatra was a major state-sponsored program aimed at the conservation and rejuvenation of the Narmada River. A key component of this initiative involved large-scale tree planting along the riverbanks to prevent soil erosion and improve the local ecology. This campaign saw participation from millions of citizens and emphasized the vital importance of forests for overall river health and sustainability.

121. (A) Teak Timber - Tendu Leaves - Bamboo - Sal Seed
Teak timber is the most economically valuable and widely extracted major forest produce in Madhya Pradesh, followed by Tendu leaves, which support a massive cottage industry. Bamboo follows as a significant resource for the paper and pulp sector. Sal seeds, primarily collected in the eastern regions, rank lower in terms of overall value and volume compared to the primary timber species, illustrating the diverse commercial output of state forests.

122. (D) Tribal Welfare Department
The Tribal Welfare Department is the nodal agency in Madhya Pradesh responsible for implementing the Scheduled Tribes and Other Traditional Forest Dwellers Act. It oversees the recognition and vesting of forest rights to eligible individuals and communities. This department ensures that the legal provisions aimed at social justice and land tenure security for forest-dependent populations are executed effectively at the grassroots level throughout the state.

123. (C) 2006
The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act was passed in 2006 to recognize the rights of forest-dwelling communities. This landmark legislation aims to undo historical injustices by granting legal land titles to eligible tribal and traditional forest dwellers. In Madhya Pradesh, the implementation of this act has significantly impacted the relationship between forest communities and the state forest department.

Click Here to Buy book on Amazon

124. (B) Generating livelihood options for communities to reduce forest dependency.
The concept of 'Eco-development' in Madhya Pradesh involves generating sustainable livelihood options for communities living around protected areas to reduce their dependency on forest resources. By providing alternatives such as skill training, self-employment opportunities, or better agricultural techniques, the government aims to minimize human pressure on forests. This approach helps in achieving conservation goals while simultaneously improving the socio-economic conditions of local residents.

125. (A) I, III, II, IV
The administrative structure of the state forest department is organized into hierarchical tiers to ensure efficient resource management. The Forest Circle is the largest administrative unit, followed by the Forest Division. Below the division level are Forest Sub-divisions and then the Forest Range. This structured approach facilitates localized monitoring of conservation efforts, revenue collection from timber, and enforcement of wildlife protection laws across the state.

126. (A) The right to hold forest land for habitation or self-cultivation.
The Forest Rights Act primarily grants eligible tribal populations and traditional forest dwellers the right to hold and live on forest land. This includes land used for habitation or self-cultivation for livelihood purposes. The act aims to redress historical injustices by providing legal recognition to the occupancy and usage rights that these communities have traditionally enjoyed within the diverse forested landscapes of Madhya Pradesh.

127. (A) V only
Biodiversity conservation in Madhya Pradesh involves both in-situ methods like National Parks and ex-situ methods like botanical gardens. Wildlife corridors are essential for the movement of tigers to maintain genetic diversity. However, the state government strictly discourages the introduction of invasive exotic species, as they can outcompete native flora and disrupt the delicate balance of the natural forest ecosystems, habitats, and diverse wildlife populations.

128. (D) Dahia (Shifting cultivation)
Shifting cultivation, locally known as Dahia or Penda, was historically practiced by some tribal communities in Madhya Pradesh. This method involved clearing forest patches for agriculture and then moving to new areas once the soil was depleted. Due to its detrimental impact on forest cover and soil health, the practice has been largely regulated or banned in favor of settled agriculture and modern conservation efforts.

129. (B) To ensure environmental stability and ecological balance through sustainable management.
The Madhya Pradesh State Forest Policy of 2005 focuses on maintaining environmental stability and ecological balance through the sustainable management of forest resources. It aims to ensure that the needs of the present generation are met without compromising the ability of future generations to utilize forest wealth. This policy integrates community participation with modern scientific techniques to protect the state's extensive and unique biodiversity.

130. (A) P-2, Q-3, R-4, S-1
Project Tiger was first implemented in Kanha National Park to protect the Bengal tiger population. The Vulture Conservation Breeding Centre is located near Kerwa in Bhopal. Gharial conservation is the primary focus of the National Chambal Sanctuary in northern Madhya Pradesh. Kuno National Park was selected for the historic Cheetah reintroduction project, bringing the species back to the Indian landscape after decades of extinction.

www.nodia.in

Downloaded from www.pdf.tube

CHAPTER 10
Rivers, Hills and Plateaus

1. The primary reason for the formation of extensive ravines in the lower Chambal valley is attributed to which phenomenon?
(A) Severe sheet erosion due to heavy rainfall
(B) Wind erosion during dry summer months
(C) Glacial activity during the Pleistocene epoch
(D) Gully erosion cutting through alluvial soils

2. The major water divide separating the Ganga drainage system from the Narmada drainage system in Madhya Pradesh is formed by the:
(A) Satpura Range
(B) Maikal Hills
(C) Vindhyan Range
(D) Mahadeo Hills

3. Which of the following is NOT a right-bank tributary of the Narmada River?
(A) Hiran
(B) Barna
(C) Burhner
(D) Kolar

4. The Satpura Range is a series of hills flanking the Narmada valley to the south. Which of the following is the easternmost extension of the Satpura Range?
(A) Rajpipla Hills
(B) Mahadeo Hills
(C) Maikal Hills
(D) Gawilgarh Hills

5. Only the upper course of the Mahanadi River basin lies in Madhya Pradesh. This segment is primarily located in which region of the state?
(A) Malwa Plateau
(B) Baghelkhand and Eastern MP
(C) Bundelkhand Plateau
(D) Nimar region

6. Identify the correct pair representing a hill range and its predominant rock type in Madhya Pradesh.
(A) Satpura Range - Coral limestone
(B) Vindhya Range - Sandstone and limestone
(C) Maikal Hills - Pure marble
(D) Bundelkhand - Recent alluvium

NODIA

7. The general drainage pattern of Madhya Pradesh is predominantly characterized by which of the following types?
(A) Trellis and parallel
(B) Radial and dendritic
(C) Centripetal and deranged
(D) Annular and karst

8. The Tons (Tamas) River, which forms a significant drainage basin in the Rewa plateau region, eventually joins which major river?
(A) Yamuna
(B) Ganga
(C) Son
(D) Betwa

9. Read the following statements regarding the water divide in Madhya Pradesh:
I. The Vindhya Range acts as a water divide between the Ganga and Narmada basins.
II. The Satpura Range divides the Narmada and Tapti river basins.
III. The Maikal Hills separate the Narmada and Mahanadi drainage systems.
IV. The Kaimur Hills act as a water divide between the Son and Tons river systems.
Which of the above statement(s) is/are correct?
(A) I, II and III only
(B) I, III and IV only
(C) II, III and IV only
(D) I, II, III and IV

10. Read the following statements regarding the Betwa River:
I. It originates in the Raisen district of Madhya Pradesh.
II. It flows entirely within the state borders of Madhya Pradesh.
III. It joins the Yamuna river near Hamirpur in Uttar Pradesh.

Which of the above statement(s) is/are INCORRECT?
(A) I and II only
(B) II only
(C) I and III only
(D) III only

11. The Kaimur Hills play a crucial role in influencing the drainage pattern by directing which of the following rivers northwards initially?
(A) Betwa
(B) Ken
(C) Dhasan
(D) Son

12. Identify the river that originates from Multai in the Betul district and flows westward parallel to the Narmada River.
(A) Son
(B) Mahi
(C) Tapti
(D) Sabarmati

13. Which among the following rivers originates in the Vidisha district and bisects the Guna district while flowing northwards?
(A) Sindh
(B) Kuno
(C) Kwari
(D) Dhasan

14. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Read the statements and select the correct answer using the codes given below:
Assertion (A): The Narmada River flows westwards while most other major peninsular rivers flow eastwards.
Reason (R): The Narmada occupies a rift valley that slopes towards the west.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

15. The Maikal Hills act as a significant geographical feature primarily because they:
(A) Contain the state's highest peak near Pachmarhi
(B) Form the western boundary of the Malwa plateau
(C) Are the only source of diamond mining in the state
(D) Serve as the origin point for radial drainage

16. Which of the following correctly describes the origin point of the Narmada River?
(A) Amarkantak plateau in Anuppur district
(B) Janapav Hill in Indore district
(C) Kumra village in Raisen district
(D) Multai in Betul district

17. What type of geological structure characterizes the Vindhya Range in Madhya Pradesh?
(A) Block mountains and escarpments
(B) Young fold mountains
(C) Volcanic cones
(D) Coral origin formations

18. Which of the following rivers is often referred to as the Ganga of Madhya Pradesh due to its pollution levels and geographical importance?
(A) Betwa
(B) Narmada
(C) Chambal
(D) Kshipra

19. Which of the following inter-state river water disputes significantly involves Madhya Pradesh, Gujarat, Maharashtra, and Rajasthan?
(A) Mahadayi Water Dispute
(B) Krishna Water Dispute
(C) Cauvery Water Dispute
(D) Narmada Water Dispute

20. Which of the following rivers is known to flow through the Panna National Park, significantly contributing to the local ecosystem of the Bundelkhand region?
(A) Ken
(B) Tons
(C) Sindh
(D) Dhasan

21. Match the hill range or peak in List I with its characteristic or location in List II and select the correct answer using the options provided.
List I: (Hill Range/Peak)

Click Here to Buy book on Amazon

India for decades. The park's vast grasslands and abundant prey base make it a suitable habitat for these large cats. This ambitious conservation project aims to restore the ecological balance and promote biodiversity within the semi-arid landscape of northern Madhya Pradesh.

82. (A) Katha
The wood of the Khair tree (Acacia catechu) is the primary raw material for producing katha, a substance used extensively in the preparation of traditional betel leaves (paan). Madhya Pradesh has several katha processing units, especially in the northern districts where Khair trees are abundant. The extraction process involve boiling the heartwood to obtain the resinous katha, providing important industrial employment.

83. (D) Tendu leaves
Tendu leaves are a nationalized forest produce in Madhya Pradesh, meaning their collection and trade are strictly controlled by the state government. This nationalization was implemented to protect tribal collectors from exploitation by private contractors and to ensure a fair distribution of profits. Other items like honey and Mahua flowers are generally considered non-nationalized, allowing for more flexible trade by local communities and individuals.

84. (C) Kanha National Park
Kanha National Park is the largest national park in Madhya Pradesh in terms of its core area. Known for its picturesque landscapes and diverse wildlife, it was one of the first parks to be included under Project Tiger. The park's extensive grasslands and dense Sal forests provide an ideal habitat for a wide range of species, including the endangered Hard Ground Swamp Deer.

85. (C) Gond
The Gond tribe, one of the largest tribal communities in Madhya Pradesh, relies heavily on the collection of Chironji (Buchanania lanzan) as a major source of cash income. Chironji seeds are gathered from the forest, processed, and sold for use in various sweets and traditional medicines. This activity provides essential economic support for Gond families, especially in the central and eastern forested districts.

86. (B) Spring and early summer (March to May)
The collection of Mahua flowers in Madhya Pradesh typically occurs during the spring and early summer months, from March to May. During this period, the trees shed their succulent, cream-colored flowers, which are then gathered from the forest floor by tribal families. These flowers are dried and stored for use as food or for brewing traditional beverages, representing a crucial seasonal resource.

87. (B) Madhav National Park
Madhav National Park, located in the Shivpuri district, is geographically bisected by the National Highway 46. It is well-known for the historic George Castle, built at its highest point to provide a view of the surrounding landscape. The park features a mix of dry deciduous forests and open grasslands, supporting populations of deer, antelope, and various species of migratory birds.

NODIA

88. (B) Teak logs
Teak logs are classified as major forest produce because they are a primary source of high-value timber. In contrast, items like Harra, Bahera, and Amla are considered minor forest produce (MFP) or non-timber forest products. The management and trade of major timber are subject to much stricter government regulations and working plans compared to the collection and sale of minor forest items.

89. (B) Budhni (Sehore)
Budhni, located in the Sehore district, is famous for its traditional cottage industry of making wooden toys. Artisans in this region primarily utilize softwoods from the nearby forests to carve and paint intricate toys and decorative items. This craft has been passed down through generations and provides a unique source of livelihood for local families, combining artistic skill with forest-based raw materials.

90. (A) Processing, marketing, and conservation of medicinal and aromatic plant species.
The Sanjeevani Institute, established by the Madhya Pradesh Forest Department, focuses on the processing, marketing, and conservation of medicinal and aromatic plants. It aims to add value to the forest produce collected by tribal communities and ensure they receive a fair price. The institute also promotes the sustainable

(A) Deccan Trap basalts
(B) Vindhyan sandstones
(C) Granites and Gneisses
(D) Gondwana coal deposits

32. Read the following statements regarding the Narmada Rift Valley:
I. It is an elongated depression between the Vindhya and Satpura ranges.
II. It was formed due to the subsidence of land between two parallel faults.
III. The valley is characterized by deep alluvial deposits in its central part.
IV. It predominantly features a dendritic drainage pattern.
V. It slopes generally from east to west.
Which of the above statement(s) is/are correct?
(A) I, II, III and V
(B) I, III, IV and V
(C) II, III, IV and V
(D) I, II, III, IV and V

33. The highest peak of Madhya Pradesh, Dhupgarh, has an altitude of exactly:
(A) 1150 meters
(B) 1350 meters
(C) 1450 meters
(D) 1550 meters

34. The Dhuandhar waterfall, famous for its misty plunge over marble rocks, is situated on which river?
(A) Chambal
(B) Betwa
(C) Tapti
(D) Narmada

35. The Narmada Valley in Madhya Pradesh is structurally classified as a:
(A) Rift valley
(B) U-shaped glacial valley
(C) V-shaped river valley
(D) Blind valley

36. The groundwater potential in the Malwa Plateau is comparatively higher than in the Bundelkhand Plateau. What is the primary geographical reason for this?
(A) Granitic rock in Bundelkhand limits percolation
(B) Malwa receives double the annual rain of Bundelkhand
(C) Malwa is entirely flat, preventing surface runoff
(D) Bundelkhand lacks vegetation, causing evaporation

37. Amarkantak is recognized as a unique geographical entity because it represents the convergence of which two mountain ranges?
(A) Vindhya and Satpura
(B) Vindhya and Aravalli
(C) Satpura and Aravalli
(D) Mahadeo and Rajpipla

38. What is the most significant climatic challenge faced by the Bundelkhand Plateau region, largely due to its geographical characteristics?
(A) Frequent devastating floods
(B) Extreme frost damage to crops
(C) High humidity and waterlogging
(D) Recurrent droughts and water scarcity

39. Which type of rock sequence in Madhya Pradesh is globally famous for yielding diamonds?
(A) Gondwana sequence
(B) Dharwar sequence
(C) Archean sequence
(D) Vindhyan sequence

40. Identify the odd one out among the following plateaus based on their location within Madhya Pradesh.
(A) Malwa Plateau
(B) Baghelkhand Plateau
(C) Bundelkhand Plateau
(D) Chotanagpur Plateau

41. Match the waterfall in List I with its river or location in List II and select the correct answer using the options provided.
List I: (Waterfall)
P. Patalpani
Q. Keoti
R. Sahastradhara
S. Pandav Falls
List II: (River/Location)
1. Mahana river
2. Narmada river
3. Chambal river
4. Ken river system
(A) P-3, Q-1, R-2, S-4

Downloaded from www.pdf.tube

(D) Northern border

83. What is the defining characteristic of the drainage pattern in the Amarkantak region?
(A) Centripetal drainage where rivers flow inwards to a central lake
(B) Trellis drainage structured by parallel folds in the mountain ranges
(C) Annular drainage forming circular patterns around a structural dome
(D) Radial drainage where rivers flow outwards from a central high

84. The origin of the Mahi River, which traverses western Madhya Pradesh before entering Rajasthan and Gujarat, is in which district?
(A) Jhabua
(B) Alirajpur
(C) Dhar
(D) Barwani

85. The Bansagar Dam is a multipurpose river valley project located on which of the following rivers?
(A) Betwa
(B) Narmada
(C) Son
(D) Chambal

86. The Bhedaghat gorge near Jabalpur is an excellent example of river erosion carving through which type of rock?
(A) Basalt
(B) Marble
(C) Sandstone
(D) Granite

87. Which river is historically associated with the epic Mahabharata as the river 'Charmanwati'?
(A) Betwa
(B) Chambal
(C) Kshipra
(D) Son

88. The Tawa River, the longest tributary of the Narmada, originates from which hill range?
(A) Kaimur Range
(B) Mahadeo Hills
(C) Rajpipla Hills
(D) Maikal Hills

NODIA

89. Which of the following is an odd one out based on the direction of river flow?
(A) Betwa
(B) Narmada
(C) Son
(D) Chambal

90. Which major inter-state river link project fundamentally involves the transfer of surplus water to the drought-prone Bundelkhand region?
(A) Ken-Betwa Link Project
(B) Narmada-Kshipra Link Project
(C) Chambal-Sindh Link Project
(D) Wainganga-Pench Link Project

91. The Dhasan River is an important tributary of which river flowing through the Bundelkhand region?
(A) Ken
(B) Betwa
(C) Tons
(D) Son

92. Identify the incorrect statement regarding the Tons (Tamas) River.
(A) It is a major tributary of the Ganga river.
(B) It forms the famous Purwa waterfall in Rewa.
(C) It originates from the Janapav Hills in Indore.
(D) It is also known as the Tamas River.

93. The Narmada Control Authority (NCA) was set up primarily to resolve disputes and implement orders regarding the Narmada river waters among which states?
(A) MP, UP, Bihar, and Jharkhand
(B) MP, Maharashtra, Karnataka, and Goa
(C) MP, Gujarat, Maharashtra, and Rajasthan
(D) MP, Chhattisgarh, Odisha, and Andhra Pradesh

94. The 'Marble Rocks' near Jabalpur, characterized by massive magnesium limestone formations, belong to which geological epoch/system?
(A) Tertiary system
(B) Gondwana system
(C) Dharwar system
(D) Quaternary system

(A) Upper reaches of the Narmada near Amarkantak
(B) Central Malwa Plateau districts
(C) Western Baghelkhand
(D) Lower Chambal and Sindh basin areas

52. Which soil type is predominantly found across the Malwa Plateau as a direct result of its geological formation?
(A) Red and Yellow Soil
(B) Alluvial Soil
(C) Laterite Soil
(D) Black Soil

53. Which of the following mineral resources is abundantly found in the sedimentary sequences of the Baghelkhand Plateau?
(A) Diamond
(B) Copper
(C) Coal
(D) Manganese

54. The landscape of the Malwa Plateau lacks highly elevated mountain peaks because:
(A) Heavy rainfall has completely eroded original mountains over time
(B) It was historically a massive seabed that dried up very recently
(C) It is formed by horizontal fissure-eruption lava flows
(D) It is an area characterized by continuous tectonic subsidence

55. The Chhattisgarh Plain forms a transitional zone in eastern Madhya Pradesh. This region is locally characterized by the upper basin of which river?
(A) Mahanadi
(B) Godavari
(C) Son
(D) Narmada

56. Which plateau covers the largest geographical area in Madhya Pradesh?
(A) Malwa Plateau
(B) Bundelkhand Plateau
(C) Baghelkhand Plateau
(D) Rewa-Panna Plateau

57. Kapildhara and Dugdhdhara are prominent waterfalls located near the origin point of which river?
(A) Narmada
(B) Son
(C) Mahanadi
(D) Tapti

58. The Baghelkhand Plateau is geographically positioned in which part of Madhya Pradesh?
(A) North-Western
(B) South-Western
(C) North-Eastern
(D) South-Eastern

59. The Dharwar rock system, known for its rich mineral deposits, is primarily found in which districts of Madhya Pradesh?
(A) Gwalior and Morena
(B) Indore and Ujjain
(C) Balaghat and Chhindwara
(D) Rewa and Satna

60. The Tapti Valley shares structural similarities with the Narmada Valley. Which distinct geographical feature separates the two valleys?
(A) Malwa Plateau
(B) Satpura Range
(C) Vindhya Range
(D) Ajanta Range

61. Which hill forms the highest point of the Malwa Plateau?
(A) Dhupgarh
(B) Amarkantak
(C) Sigar peak
(D) Chauragarh

62. What geological event is primarily responsible for the formation of the coal reserves found in eastern Madhya Pradesh?
(A) Accumulation of vegetation in deep tectonic faults
(B) Massive volcanic eruptions occurring during the Cretaceous period
(C) Coral reef compression under pressure during the Jurassic period
(D) Glacial moraine deposition during the recent Pleistocene epoch

Click Here to Buy book on Amazon

S. Johila

List II: (Main River)

1. Chambal
2. Son
3. Narmada
4. Narmada

(A) P-3, Q-4, R-1, S-2
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-3, R-2, S-1
(D) P-2, Q-1, R-4, S-3

126. The term "Rift Valley" in the context of Madhya Pradesh's geography is most accurately defined as:
(A) A linear-shaped lowland between several highlands created by the action of a geologic fault
(B) A valley formed by glacial erosion during the ice age
(C) A deep gorge carved by a high-velocity river over millions of years
(D) A depression caused by a meteorite impact

127. Identify the odd one out among the following rivers based on their drainage basin termination.
(A) Ken
(B) Tawa
(C) Tons
(D) Son

128. The inter-state boundary between Madhya Pradesh and Uttar Pradesh is marked largely by the course of which river in the Bundelkhand region?
(A) Narmada
(B) Tapti
(C) Mahi
(D) Betwa

129. The Hasdeo River, which is a major tributary of the Mahanadi, passes through a transitional plain region located on the eastern fringes of Madhya Pradesh known as:
(A) Nimar Plain
(B) Chhattisgarh Plain
(C) Lashkar Plain
(D) Bhander Plain

130. Considering the overall geographical layout of Madhya Pradesh, which statement best summarizes the state's river system?
(A) It acts as a central water tower for diverse river systems
(B) It consists mostly of glacier-fed perennial river systems
(C) It features entirely internal drainage ending in salt lakes
(D) It is characterized by rivers navigable throughout their course

www.nodia.in

NODIA

(D) It is an island ecosystem situated in the middle of the Wainganga river

72. Identify the incorrect pair regarding the plateau and its associated average elevation.
(A) Malwa Plateau - 300 to 600 meters
(B) Bundelkhand Plateau - 150 to 400 meters
(C) Pachmarhi - Over 1000 meters
(D) Gwalior Plateau - Over 1200 meters

73. Which of the following correctly pairs a river with its tributary?
(A) Chambal - Wainganga
(B) Tapti - Barna
(C) Son - Parbati
(D) Narmada - Tawa

74. Why is the eastern part of Madhya Pradesh (Baghelkhand region) receive more rainfall than the western part (Malwa region)?
(A) It is closer to the moisture-laden Arabian Sea branch of the monsoon
(B) It has a higher temperature generating intense local convection
(C) It receives rainfall from both the major monsoon branches
(D) It is situated in the rain shadow of the Southern Western Ghats

75. The Kanhan and Pench rivers are significant tributaries that join which major river system south of Madhya Pradesh?
(A) Narmada
(B) Tapti
(C) Mahanadi
(D) Godavari

76. Which river serves as a prominent natural boundary between Madhya Pradesh and Maharashtra in the southern part of the state?
(A) Narmada
(B) Wardha
(C) Tawa
(D) Tapti

77. Which physical feature functionally separates the Malwa Plateau from the Bundelkhand Plateau?
(A) Kaimur Range
(B) Maikal Hills
(C) Mahadeo Hills
(D) Vindhyan Escarpments

NODIA

78. The "Sauser" and "Sikoli" series in Madhya Pradesh are geological rock formations belonging to which major system?
(A) Vindhyan System
(B) Gondwana System
(C) Tertiary System
(D) Dharwar System

79. Identify the incorrect statement regarding the Tapti River.
(A) It originates from the Satpura range in Betul district
(B) It empties into the Bay of Bengal
(C) It flows through a rift valley similar to the Narmada
(D) The Ukai dam is built across this river in Gujarat

80. Read the following statements regarding the Sindh River:
I. It originates in the Vidisha district.
II. It flows northwards to join the Yamuna river.
III. It forms a deep gorge before entering the plains.
Which of the above statement(s) is/are INCORRECT?
(A) I and II only
(B) III only
(C) I and III only
(D) None of the above

81. Which region of Madhya Pradesh is geographically classified under the 'Central India Plateau' (Madhya Bharat Pathar)?
(A) The south-western districts near Gujarat
(B) The northern districts including Gwalior, Morena, and Bhind
(C) The easternmost districts including Singrauli and Sidhi
(D) The central districts around Bhopal and Raisen

82. The Rajpipla Hills, part of the Satpura Range, are characterized by their location in which part of the state?
(A) Extreme East
(B) Extreme West
(C) Central region

105. What is the primary cause of the severe water scarcity observed in the Malwa plateau region during the peak summer months, despite reasonable monsoon rainfall?
(A) Complete lack of rivers originating in the region
(B) Highly porous basaltic rocks causing rapid deep percolation beyond accessible limits
(C) High surface runoff and low retention capacity of the shallow topsoil in degraded areas
(D) Glacial melting stopping during summer

106. Identify the incorrect statement regarding the plateau regions of Madhya Pradesh.
(A) The Malwa plateau is the largest physical division of the state
(B) The Bundelkhand plateau has a uniform flat topography without any undulating terrain
(C) The Baghelkhand plateau contains the oldest coal mines of the state
(D) The Rewa-Panna plateau is also known as the Vindhyan plateau

107. Which of the following features is NOT geographically associated with the Narmada Valley?
(A) Meandering course forming large oxbow lakes
(B) Escarpments of the Vindhyan range to its north
(C) Extensive deposits of black cotton soil
(D) Deep gorges formed in marble rocks

108. Which of the following is NOT a feature of the drainage basin of the Tapti River in Madhya Pradesh?
(A) It collects water from the southern slopes of the Satpura range
(B) It has poor agricultural significance due to entirely barren rocky terrain
(C) It flows through Burhanpur district before entering Maharashtra
(D) It features a parallel drainage pattern with its tributaries

109. Read the following statements regarding the physical divisions of Madhya Pradesh:
I. The Central Highlands comprise more than two-thirds of the state's total area.
II. The Narmada-Son valley is the lowest physical part of the state.
III. The Eastern Plateau (Baghelkhand) is the largest physical division of the state.
IV. The Satpura-Maikal range marks the southern boundary of the state.
V. The Malwa plateau lies to the north of the Narmada-Son valley.
Which of the above statement(s) is/are INCORRECT?
(A) I and III only
(B) III only
(C) II and IV only
(D) IV and V only

110. Why is the Narmada River heavily utilized for hydroelectric power generation despite being non-navigable?
(A) It has a very slow, meandering flow throughout its entire course
(B) It contains the highest total volume of water among all Indian rivers
(C) It features numerous vertical drops and narrow gorges
(D) It flows entirely through flat, wide alluvial plains near the sea

111. Identify the correct statement regarding the Wardha River.
(A) It is a tributary of the Narmada river
(B) It flows exclusively within Madhya Pradesh
(C) It forms a major water divide in the northern plains
(D) It originates in the Betul district and flows southwards

112. The Kwari River, which flows through the northern part of the state, belongs to the drainage basin of which river?
(A) Betwa
(B) Sindh
(C) Chambal
(D) Son

113. The Gwalior Plateau is geologically composed primarily of which rock system?
(A) Basaltic lavas of Deccan Trap
(B) Gneissic and Granitic rocks of Archean age
(C) Sandstones and Shales of Vindhyan system
(D) Alluvial deposits of recent age

Downloaded from www.pdf.tube

95. Match the river in List I with its ancient or cultural name in List II and select the correct answer using the options provided.
List I: (River)
P. Narmada
Q. Betwa
R. Chambal
S. Ken
List II: (Ancient/Cultural Name)
1. Vetravati
2. Shuktimati
3. Reva
4. Charmanwati
(A) P-3, Q-1, R-4, S-2
(B) P-1, Q-3, R-2, S-4
(C) P-3, Q-4, R-1, S-2
(D) P-2, Q-1, R-4, S-3

96. Arrange the following plateaus of Madhya Pradesh in correct sequence from West to East and select the correct option.
1. Baghelkhand Plateau
2. Malwa Plateau
3. Bundelkhand Plateau
(A) 2, 3, 1
(B) 1, 3, 2
(C) 2, 1, 3
(D) 3, 2, 1

97. The Parbati River, a significant right-bank tributary of the Chambal, originates from which geographical feature?
(A) Mahadeo Hills in Chhindwara district
(B) Kaimur Range in Katni district
(C) Aravalli Range in Neemuch district
(D) Vindhya Range in Sehore district

98. Read the following statements regarding the Kshipra river and select the correct option.
Statement I: It is a tributary of the Chambal river.
Statement II: It originates in the Kakri Bardi hills of Indore.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

99. Which of the following valleys structurally marks the southern boundary of the Satpura Range?
(A) Narmada Valley
(B) Tapti Valley
(C) Son Valley
(D) Chambal Valley

100. The geographical phenomenon where a river cuts across a geological structure older than the river itself, maintaining its original course, is termed as superimposed drainage. Which river in MP exhibits this in the central highlands?
(A) Wainganga
(B) Narmada
(C) Chambal
(D) Tapti

101. Identify the incorrect statement regarding the geological history of the state.
(A) The Baghelkhand region lacks significant coal reserves
(B) The Malwa plateau is formed from Deccan trap volcanic activity
(C) The Aravalli range touches the northwestern boundary of the state
(D) The Vindhyan system consists largely of sedimentary rocks

102. Which of the following represents the correct sequence of the highest peaks of Madhya Pradesh in descending order of their altitude?
(A) Dhupgarh, Chauragarh, Amarkantak, Sigar
(B) Chauragarh, Dhupgarh, Sigar, Amarkantak
(C) Dhupgarh, Amarkantak, Chauragarh, Sigar
(D) Sigar, Dhupgarh, Amarkantak, Chauragarh

103. The occurrence of extensive alluvial soils in the northern districts of Bhind, Morena, and Gwalior is a direct effect of:
(A) Wind deposition from the Thar desert
(B) Fluvial deposition by the Chambal and Yamuna river systems
(C) Past tectonic uplifts of the seabed
(D) Weathering of local basaltic rocks

104. The term "Badland topography" in Madhya Pradesh is exclusively associated with which river basin?
(A) Narmada basin
(B) Wainganga basin
(C) Tapti basin
(D) Chambal basin

NODIA

(B) P-1, Q-3, R-4, S-2
(C) P-3, Q-2, R-1, S-4
(D) P-2, Q-1, R-3, S-4

42. The Malwa Plateau was primarily formed due to which geological process?
(A) Deposition of alluvium by Himalayan rivers
(B) Upliftment of ancient sedimentary rocks
(C) Solidification of basaltic lava flows
(D) Tectonic folding during the Tertiary period

43. Read the following statements regarding the geological structure of Madhya Pradesh and select the correct option.
Statement I: The state is part of the oldest landmass known as Gondwanaland.
Statement II: Recent alluvial deposits cover more than 50 percent of the state's total area.
(A) Both Statement I and Statement II are true
(B) Both Statement I and Statement II are false
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

44. Match the geographical region in List I with its soil or rock characteristic in List II and select the correct answer using the options provided.
List I: (Geographical Region)
P. Malwa Plateau
Q. Bundelkhand Plateau
R. Baghelkhand Plateau
S. Narmada Valley
List II: (Soil/Rock Characteristic)
1. Granitic formations with mixed red-black soil
2. Deep alluvial and black clay deposits
3. Volcanic origin with predominantly black soil
4. Gondwana rocks with red-yellow soil
(A) P-3, Q-1, R-4, S-2
(B) P-1, Q-3, R-2, S-4
(C) P-3, Q-4, R-1, S-2
(D) P-2, Q-1, R-4, S-3

45. Which river forms the Chachai waterfall, one of the highest in Madhya Pradesh, in the Rewa plateau region?
(A) Tons
(B) Ken
(C) Bihad
(D) Son

46. Pachmarhi, the famous hill station of Madhya Pradesh, is situated in which of the following hill ranges?
(A) Rajpipla Hills
(B) Mahadeo Hills
(C) Maikal Hills
(D) Kaimur Hills

47. Which of the following rivers is an exception, as it does not flow towards the north or northeast like most rivers originating from the central highlands?
(A) Betwa
(B) Wainganga
(C) Chambal
(D) Ken

48. Which of the following represents the correct geographical sequence of mountain ranges in Madhya Pradesh from North to South?
(A) Vindhya Range, Mahadeo Hills, Gawilgarh Hills
(B) Satpura Range, Vindhya Range, Kaimur Range
(C) Kaimur Range, Mahadeo Hills, Rajpipla Hills
(D) Rajpipla Hills, Mahadeo Hills, Maikal Hills

49. Arrange the following rivers of Madhya Pradesh in descending order of their total length and select the correct sequence.
1. Tapti
2. Narmada
3. Chambal
4. Son
(A) 2, 3, 4, 1
(B) 2, 3, 1, 4
(C) 2, 4, 3, 1
(D) 3, 2, 4, 1

50. The Northern Plains and Gwalior Plateau region of Madhya Pradesh is primarily influenced by the depositional activities of which river system?
(A) Narmada system
(B) Tapti system
(C) Chambal system
(D) Mahanadi system

51. Which of the following zones in Madhya Pradesh is highly susceptible to flood-prone conditions during the monsoon season?

Click Here to Buy book on Amazon

114. The Bina, Dhasan, and Jamni rivers are major tributaries of which central Indian river?
(A) Ken
(B) Betwa
(C) Sindh
(D) Tons

115. Which plateau in Madhya Pradesh forms a geographical transition between the northern plains of India and the Deccan plateau?
(A) Baghelkhand Plateau
(B) Bundelkhand Plateau
(C) Madhya Bharat Pathar
(D) Malwa Plateau

116. The highest peak of the Bundelkhand plateau is known as:
(A) Sigar peak
(B) Dhupgarh
(C) Chauragarh
(D) Siddha Baba peak

117. Which river serves as a prominent source of water for the Panna Biosphere Reserve and forms a deep gorge known as the Pandav Falls?
(A) Betwa
(B) Son
(C) Tons
(D) Ken

118. The Bhander and Kaimur ranges are eastern sub-divisions of which major mountain system?
(A) Satpura Range
(B) Aravalli Range
(C) Maikal Range
(D) Vindhyan Range

119. The groundwater potential in the Bundelkhand plateau is notoriously low. This is primarily the effect of:
(A) Hard, non-porous granitic rocks that prevent water percolation
(B) Very steep slopes causing all water to drain into the Yamuna instantly
(C) Excessive extraction by heavy industries in the region
(D) Dense forest cover absorbing all the rainwater

120. Which of the following is an odd one out based on the origin source of the rivers?
(A) Tapti
(B) Narmada
(C) Son
(D) Johila

121. Which of the following hills serves as the primary origin point for the Betwa river?
(A) Kumra village hills
(B) Kakri Bardi Hills
(C) Janapav Hills
(D) Amarkantak Hills

122. Which geographical factor is most responsible for the Malwa plateau acting as a water divide between the Arabian Sea drainage and the Bay of Bengal drainage?
(A) Its absolute flat terrain which prevents any directional water slope
(B) Its composition of highly permeable rocks allowing vertical drainage
(C) Its high elevation exceeding 1500 meters across the entire state
(D) Its central location and general slope towards the north and west

NODIA

123. The origin point of the Ken River is geographically located in which of the following ranges?
(A) Bhander Range
(B) Mahadeo Hills
(C) Kaimur Range
(D) Rajpipla Hills

124. The extensive deep black soils found in the Narmada valley are primarily the result of:
(A) Alluvial deposits brought down from the Himalayan range to the north
(B) Weathering of basaltic rocks from the Malwa and Satpura regions
(C) Massive accumulation of dense forest decay over several centuries
(D) Wind-blown loess deposits originating from the western Thar desert

125. Match the tributary in List I with its main river in List II and select the correct answer using the options provided.
List I: (Tributary)
P. Barna
Q. Kolar
R. Parbati

63. Navigation in the rivers of Madhya Pradesh is severely restricted. Which of the following best explains this geographical limitation?
(A) Rivers flow through rugged terrain featuring gorges, rapids, and waterfalls
(B) Most rivers dry up completely for ten months of the year
(C) The rivers are exclusively reserved for hydroelectricity generation
(D) There is a state-wide ban on riverine transport

64. The Johila River is an important tributary of which major river originating from the Amarkantak plateau?
(A) Narmada
(B) Mahanadi
(C) Son
(D) Tapti

65. Why does the eastern part of Madhya Pradesh (Baghelkhand region) receive more rainfall than the western part (Malwa region)?
(A) It is closer to the moisture-laden Arabian Sea branch of the monsoon
(B) It has a higher temperature generating intense local convection
(C) It receives rainfall from both the major monsoon branches
(D) It is situated in the rain shadow of the Southern Western Ghats

66. Read the following statements regarding the geological structure of Madhya Pradesh:
I. The Vindhyan rock system is entirely devoid of fossil evidence.
II. The Deccan Trap covers the entire eastern portion of Madhya Pradesh.
III. The Gondwana rock system is primarily found in the Satpura and Baghelkhand regions.
IV. The Archean rock system forms the base of the Bundelkhand plateau.
Which of the above statement(s) is/are INCORRECT?
(A) I and II only
(B) II and III only
(C) I and IV only
(D) III and IV only

67. Identify the river that forms a significant portion of the natural northern boundary between Madhya Pradesh and Rajasthan.
(A) Betwa
(B) Parbati
(C) Chambal
(D) Mahi

68. The historical city of Ujjain is situated on the banks of which river?
(A) Betwa
(B) Kshipra
(C) Chambal
(D) Narmada

69. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Read the statements and select the correct answer using the codes given below:
Assertion (A): The Malwa Plateau region experiences a relatively moderate and equitable climate throughout the year.
Reason (R): The plateau is largely composed of basaltic rocks of volcanic origin which rapidly dissipate heat.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

70. Which river is known as the "Lifeline of Madhya Pradesh" due to its extensive basin, course, and economic significance?
(A) Chambal
(B) Betwa
(C) Narmada
(D) Son

71. Which of the following provides the best geographical explanation for the location of the Pachmarhi biosphere reserve?
(A) It sits on elevated sandstone hills of the Satpura range, supporting diverse flora and fauna
(B) It is located in a deep depression of the Narmada rift valley ensuring high moisture
(C) It is situated in the dry badlands of Chambal, preserving desert ecosystems

Downloaded from www.pdf.tube

ANSWERS

1. (D) Gully erosion cutting through alluvial soils
Extensive ravines in the lower Chambal valley are primarily formed due to vertical gully erosion. This process occurs as water cuts deep into the soft alluvial soil, creating a network of deep channels. The semi-arid climate and lack of vegetation accelerate this land degradation, leading to a landscape known as badland topography, making agriculture nearly impossible.

2. (C) Vindhyan Range
The Vindhyan Range serves as a major geographical water divide in central India. It separates the northward-flowing rivers of the Ganga drainage system, such as the Chambal and Betwa, from the westward-flowing Narmada River. This mountain range ensures that waters from the central highlands flow in distinct directions, defining the state's intricate hydrological boundaries and flow patterns.

3. (C) Burhner
The Narmada River is fed by numerous tributaries from both banks. While the Hiran, Barna, and Kolar rivers join the Narmada from the right bank, the Burhner is a significant left-bank tributary. Understanding the spatial distribution of these tributaries is crucial for studying the drainage basin's geometry and the overall hydrological network of this major westward-flowing river system.

4. (C) Maikal Hills
The Satpura Range is a complex mountain system comprising several sub-ranges. Moving from west to east, it consists of the Rajpipla Hills, followed by the Mahadeo Hills in the central section, and finally the Maikal Hills at the easternmost end. These hills are vital as they form the source region for several major rivers, including the Narmada and Son.

5. (B) Baghelkhand and Eastern MP
Although the majority of the Mahanadi River basin lies in Chhattisgarh and Odisha, its upper reaches originate and flow through the eastern parts of Madhya Pradesh. This segment is specifically located within the Baghelkhand plateau and the eastern districts. The region features rugged terrain where small tributaries begin their journey before joining the main channel of the Mahanadi system.

6. (B) Vindhya Range - Sandstone and limestone
The Vindhya Range is predominantly composed of sedimentary rocks such as sandstone, shale, and limestone. These geological formations were deposited in ancient basins and have since been uplifted. Unlike the basaltic Deccan Trap found in the Malwa region or the granitic Archean rocks of Bundelkhand, the Vindhyan system is globally recognized for its distinct strata and significant mineral deposits.

7. (B) Radial and dendritic
Madhya Pradesh exhibits diverse drainage patterns due to its varied topography. A radial pattern is prominent in the Amarkantak region, where rivers like the Narmada and Son flow in different directions from a central highland. Meanwhile, a dendritic pattern, resembling tree branches, is common across the plateaus, where rivers and their tributaries systematically drain the vast interior regions.

8. (B) Ganga
The Tons River, historically known as the Tamas, originates from the Kaimur Range and flows through the Rewa plateau. It is a major southern tributary of the Ganga River system. As it moves northward across the plains, it forms spectacular waterfalls, such as Purwa, before ultimately merging with the Ganga in the Prayagraj region of Uttar Pradesh state.

9. (D) I, II, III and IV
Central India's geography is defined by several critical water divides. The Vindhya Range separates the Ganga and Narmada basins, while the Satpura Range divides the Narmada and Tapti rivers. Further east, the Maikal Hills partition the Narmada and Mahanadi systems. Additionally, the Kaimur Hills act as a boundary between the

NODIA

feet above the water, making it a unique and breathtaking landscape.

87. (B) Chambal
The Chambal River is historically and culturally identified with the river 'Charmanwati' mentioned in ancient Indian epics like the Mahabharata. It is one of the cleanest and least polluted rivers in the country. The river is known for its legendary association with various mythological stories and for its unique badland topography, which has historically provided a refuge for diverse wildlife and legendary outlaws.

88. (B) Mahadeo Hills
The Tawa River originates in the Mahadeo Hills of the Satpura Range, specifically in the Chhindwara district. As the longest tributary of the Narmada River, it flows northwards through the Betul and Hoshangabad districts. The river is also known for the Tawa Dam, which is the state's largest irrigation project, playing a crucial role in the agriculture of the Narmada valley.

89. (B) Narmada
In the context of Madhya Pradesh's drainage system, the Narmada River is an exception because it flows westwards into the Arabian Sea. In contrast, the Betwa, Son, and Chambal rivers all flow generally towards the north or northeast to eventually join the Yamuna or Ganga river systems. This difference in direction is due to the Narmada's course through a westward-tilting rift valley.

90. (A) Ken-Betwa Link Project
The Ken-Betwa Link Project is a landmark inter-state river linking initiative aimed at transferring surplus water from the Ken River to the Betwa River. This project is specifically designed to provide irrigation and drinking water to the drought-prone Bundelkhand region, which spans across Madhya Pradesh and Uttar Pradesh. It is a major component of the National River Linking Project for security.

91. (B) Betwa
The Dhasan River is a major right-bank tributary of the Betwa River. It flows through the Bundelkhand region, passing through parts of Madhya Pradesh and Uttar Pradesh. The river originates in the Raisen district and travels northwards. It is an essential water source for the arid plains of Bundelkhand and contributes significantly to the overall drainage and ecology of the Betwa river basin.

92. (C) It originates from the Janapav Hills in Indore.
The Tons River, also known as the Tamas, originates from the Tamakund in the Kaimur Range, not the Janapav Hills. The Janapav Hills are the origin of the Chambal River. The Tons is a significant southern tributary of the Ganga and is well-known for creating the Purwa waterfall on the Rewa plateau before it continues its journey towards its confluence in Uttar Pradesh.

93. (C) MP, Gujarat, Maharashtra, and Rajasthan
The Narmada Control Authority was established to implement the decisions of the Narmada Water Disputes Tribunal. Its primary role is to coordinate and oversee the sharing of the river's water among the four participating states: Madhya Pradesh, Gujarat, Maharashtra, and Rajasthan. The authority ensures that the construction and operation of various dams and projects along the river follow the agreed-upon legal framework.

94. (C) Dharwar system
The 'Marble Rocks' of Bhedaghat near Jabalpur belong to the ancient Dharwar geological system. These formations consist of highly metamorphosed magnesium limestone that has been transformed into marble over millions of years. This rock system is among the oldest in the Indian subcontinent and is prized for its aesthetic beauty and geological significance, illustrating the complex tectonic history of the central region.

95. (A) P-3, Q-1, R-4, S-2
Many rivers in Madhya Pradesh have ancient names recorded in classical literature. The Narmada was known as Reva. The Betwa was referred to as Vetravati. The Chambal was historically called Charmanwati. The Ken River was known by the name Shuktimati. These names reflect the deep cultural and historical importance of these water bodies in the Indian tradition and ancient texts.

96. (A) 2, 3, 1
Moving from west to east across the northern part of Madhya Pradesh, the sequence of major plateaus begins with the vast Malwa Plateau.

Click Here to Buy book on Amazon

to the creation of the Narmada Control Authority for implementing water-sharing agreements.

20. (A) Ken
The Ken River is a lifeline for the Bundelkhand region and is famous for flowing through the heart of the Panna National Park. This river creates deep gorges and scenic waterfalls, such as Pandav Falls, while supporting the park's rich biodiversity. It is one of the cleanest rivers in India and is currently central to a major inter-linking project.

21. (A) P-3, Q-2, R-4, S-1
The physical geography of Madhya Pradesh is defined by distinct ranges. The Vindhya Range forms the northern escarpment of the Narmada valley. The Satpura Range is located between the Narmada and Tapti rivers. The Maikal Hills are the crescent-shaped eastern extension of the Satpura system. Finally, the Kaimur Hills act as a divide between the Son and Tons systems.

22. (B) It forms a natural boundary between Madhya Pradesh and Maharashtra
The Chambal River originates from Janapav Hill and flows northwards, eventually joining the Yamuna. While it is famous for its extensive ravine erosion and forms the natural boundary between Madhya Pradesh and Rajasthan, it does not share any border with Maharashtra. Maharashtra is located far to the south of the Chambal basin, making that specific geographic association incorrect.

23. (D) It flows northwards before turning eastwards
After originating from the Amarkantak plateau, the Son River initially flows in a northward direction. This course is dictated by the presence of the Kaimur Hills, which prevent an immediate eastward turn. Eventually, the river finds a path through the highlands and turns eastwards across the plains of Bihar to join the Ganga River as a major southern tributary.

24. (C) East to West
The Vindhya Range is a vast mountain chain that stretches predominantly in an east-to-west direction across the central part of India. In Madhya Pradesh, it acts as a significant barrier between northern and southern India. It consists of several sub-ranges like the Bhander and Kaimur hills, providing the source for many rivers that drain into the Ganga system.

25. (B) Indore
The Kshipra River is of great religious importance, hosting the Simhastha Kumbh Mela at Ujjain. This river originates in the Indore district, specifically from the Kakri Bardi hills. It flows northward across the Malwa plateau before joining the Chambal River. The Kshipra is considered a holy river, and its banks are lined with numerous temples and historical pilgrimage sites.

26. (D) It forms an estuary rather than a delta
Because the Narmada River flows through a hard, rocky rift valley, it carries a relatively low load of silt compared to rivers flowing through plains. Furthermore, its high velocity as it enters the sea prevents the accumulation of sediment. Consequently, instead of forming a typical delta, the Narmada creates an estuary where it meets the waters of the Arabian Sea.

27. (A) Higher average elevation and distinct peaks
The Satpura Range differs from the Vindhya Range primarily in its topographic profile. Satpura generally features a higher average elevation and contains the highest peak in the state, Dhupgarh. Structurally, while both are part of the central highlands, the Satpura system is more complex, consisting of various distinct hills like the Rajpipla, Mahadeo, and Maikal ranges in sequence.

28. (A) Amarkantak Plateau
The Son River is a major southern tributary of the Ganga and originates from the Amarkantak plateau. This plateau is a unique geographical feature in the Anuppur district where several rivers take birth. The Son flows northwards and then eastwards, draining the Baghelkhand region and providing essential water resources for agriculture and industry in both Madhya Pradesh and Bihar.

29. (C) Narmada Basin
The Narmada Basin is renowned for its high agricultural productivity due to the presence of deep black cotton soil. This soil, formed from the weathering of volcanic basalt, is extremely fertile and has excellent moisture-retention

Downloaded from www.pdf.tube

Son and Tons river systems, directing their flow patterns.

10. (B) II only
The Betwa River originates in the Raisen district and flows northwards through the Malwa and Bundelkhand regions. While it starts in Madhya Pradesh, it does not remain entirely within the state. It crosses into Uttar Pradesh and eventually joins the Yamuna River near Hamirpur. Therefore, describing its entire course as being within a single state is geographically inaccurate.

11. (D) Son
The Kaimur Hills, forming the eastern part of the Vindhyan Range, significantly influence the drainage of the Son River. After originating from the Amarkantak plateau, the Son River is forced to flow in a northward direction parallel to these hills before it can eventually turn eastwards to join the Ganga. These hills act as a major structural barrier.

12. (C) Tapti
The Tapti River originates from Multai in the Betul district of Madhya Pradesh. It is one of the few major rivers in India that flows from east to west through a rift valley. This river runs parallel to the Narmada River, separated by the Satpura Range, and eventually empties into the Arabian Sea after traversing Maharashtra and Gujarat states.

13. (A) Sindh
The Sindh River is a significant tributary of the Yamuna that originates in the Vidisha district. As it flows northwards across the central highlands, it serves as a prominent geographical feature that bisects the Guna district. This river plays a vital role in the irrigation and drainage of the northern part of Madhya Pradesh before reaching its confluence point.

14. (A) Both A and R are true and R is the correct explanation of A.
Unlike most peninsular rivers that flow eastwards toward the Bay of Bengal, the Narmada flows westwards. This unique direction is caused by the presence of a structural rift valley between the Vindhya and Satpura ranges. This geological depression is tilted towards the west, forcing the river to follow this specific path until it reaches the Gulf of Khambhat.

15. (D) Serve as the origin point for radial drainage
The Maikal Hills, located at the eastern end of the Satpura Range, are a critical hydrological hub. They serve as the origin point for several major rivers, including the Narmada, Son, and Johila. This results in a radial drainage pattern, where rivers flow outwards in multiple directions from a central highland area, influencing the water systems of several Indian states.

16. (A) Amarkantak plateau in Anuppur district
The Narmada River, the longest river in Madhya Pradesh, originates from the Amarkantak plateau located in the Anuppur district. This site is situated at the meeting point of the Vindhya and Satpura ranges. From here, the river embarks on a long westward journey, passing through diverse landscapes and forming spectacular features like waterfalls and deep marble-lined river gorges.

17. (A) Block mountains and escarpments
The Vindhya Range is characterized geologically as a series of block mountains and steep escarpments. It was formed primarily through tectonic activity that involved the upliftment of crustal blocks. These mountains consist of several discontinued chains that run parallel to the Narmada Valley, serving as the northern boundary of the rift valley and a major continental water divide.

NODIA

18. (A) Betwa
The Betwa River is often referred to as the Ganga of Madhya Pradesh. This comparison is primarily based on two factors: its significant cultural and geographical importance to the state and, unfortunately, its high levels of pollution similar to those found in the Ganga. It serves as a vital water source for the Malwa and Bundelkhand plateau regions.

19. (D) Narmada Water Dispute
The Narmada Water Dispute involves four major Indian states: Madhya Pradesh, Gujarat, Maharashtra, and Rajasthan. This conflict centers on the allocation and sharing of river water for irrigation, drinking, and hydroelectric power generation. To manage these issues, the Narmada Water Disputes Tribunal was established, leading

conglomerate beds within the Vindhyan strata. These geological formations have been mined for centuries, making this region the only active diamond-producing area in the country, contributing significantly to the state's mineral wealth.

40. (D) Chotanagpur Plateau
While the Malwa, Baghelkhand, and Bundelkhand plateaus are all major physical divisions located within the boundaries of Madhya Pradesh, the Chotanagpur Plateau is not. It is situated primarily in the states of Jharkhand, West Bengal, Odisha, and Chhattisgarh. Therefore, based on its geographic location outside the state of Madhya Pradesh, it is the odd one out in this list.

41. (A) P-3, Q-1, R-2, S-4
Madhya Pradesh features many spectacular waterfalls associated with its rivers. Patalpani is located on the Chambal river system near Indore. Keoti falls is situated on the Mahana river, a tributary of the Tons. Sahastradhara is a series of cascades on the Narmada river near Maheshwar. Finally, the Pandav Falls are formed by the Ken river system near the Panna region.

42. (C) Solidification of basaltic lava flows
The Malwa Plateau was formed during the Cretaceous period due to massive volcanic activity known as the Deccan Trap eruptions. These involved horizontal fissure-eruption lava flows that covered the existing landscape with thick layers of basalt. Over time, these volcanic rocks weathered to form the characteristic fertile black cotton soil that covers much of the plateau in western Madhya Pradesh today.

43. (C) Statement I is true but Statement II is false
Madhya Pradesh is part of the ancient landmass of Gondwanaland, making it geologically very old. However, the assertion that recent alluvial deposits cover more than 50 percent of the state is incorrect. While alluvium is found in the northern river basins, a large portion of the state is actually covered by basaltic traps, sedimentary rocks, and ancient crystalline formations.

44. (A) P-3, Q-1, R-4, S-2
The Malwa Plateau is of volcanic origin with black soil. Bundelkhand features granitic formations with mixed red-black soil. Baghelkhand consists of Gondwana rocks with red-yellow soil. Finally, the Narmada Valley is characterized by its deep alluvial and black clay deposits. These geological variations determine the agricultural patterns and mineral resources available in each of these distinct regions.

45. (C) Bihad
The Chachai waterfall is one of the most prominent and highest waterfalls in Madhya Pradesh. It is formed by the Bihad River as it plunges over the edge of the Rewa plateau. The Bihad is a tributary of the Tons River. This waterfall is a major tourist attraction and showcases the dramatic erosive power of rivers in the Vindhyan region.

46. (B) Mahadeo Hills
Pachmarhi, the only hill station in Madhya Pradesh, is situated in the Mahadeo Hills. This range is a central part of the larger Satpura mountain system. Pachmarhi is often called the "Queen of Satpura" due to its lush greenery, scenic waterfalls, and high-altitude peaks like Dhupgarh. Its unique geography supports a rich biosphere with diverse endemic flora and fauna.

47. (B) Wainganga
Most rivers originating from the central highlands of Madhya Pradesh, like the Betwa, Chambal, and Ken, flow towards the north or northeast to join the Yamuna or Ganga. However, the Wainganga River is an exception. It originates in the Seoni district and flows southwards into Maharashtra to join the Godavari basin, reflecting the state's diverse hydrological slope and drainage.

48. (A) Vindhya Range, Mahadeo Hills, Gawilgarh Hills
Moving from north to south across the central part of Madhya Pradesh, one first encounters the Vindhya Range, which marks the northern edge of the Narmada valley. South of the Narmada lie the Mahadeo Hills, which are part of the central Satpura Range. Further south, near the border with Maharashtra, the Gawilgarh Hills represent another section of the Satpura system.

49. (A) 2, 3, 4, 1
The rivers of Madhya Pradesh vary significantly in length. The Narmada is the longest, followed by the Chambal. The Son River is the third

Click Here to Buy book on Amazon

properties. Combined with the water available from the Narmada and its tributaries, this region has become a major hub for various commercial crops.

30. (D) Godavari system
The Wainganga River originates in the Seoni district of Madhya Pradesh and flows southwards. It eventually leaves the state and enters Maharashtra, where it joins the Wardha River to form the Pranhita River. This river system then empties into the Godavari River. Therefore, the Wainganga is a crucial component of the larger Godavari drainage system in peninsular India.

31. (C) Granites and Gneisses
The Bundelkhand Plateau is characterized by its ancient geological foundation, consisting primarily of Bundelkhand Granite and Gneiss. These are among the oldest rocks in the Indian subcontinent, belonging to the Archean era. The hard, non-porous nature of these crystalline rocks significantly influences the region's topography, soil types, and its notorious difficulty in retaining and accessing vital groundwater resources.

32. (A) I, II, III and V
The Narmada Rift Valley is a significant geological feature formed by the subsidence of land between the Vindhya and Satpura faults. It is an elongated depression that slopes from east to west, filled with deep alluvial deposits. However, its drainage pattern is not predominantly dendritic; instead, the main river and its tributaries often follow a parallel or trellis-like arrangement.

33. (B) 1350 meters
Dhupgarh is the highest peak in Madhya Pradesh and the entire Satpura Range. It has an elevation of exactly 1350 meters above sea level. Located near the hill station of Pachmarhi in the Mahadeo Hills, it is a popular destination for tourists. Its height makes it a prominent landmark, offering panoramic views of the surrounding rugged mountain landscape.

34. (D) Narmada
The Dhuandhar waterfall is located on the Narmada River near Bhedaghat in the Jabalpur district. The name refers to the smoke-like mist created by the powerful plunge of water over the rocks. This site is globally famous for its stunning white marble cliffs, which have been carved into a deep gorge by the river's erosive action over millions of years.

35. (A) Rift valley
Structurally, the Narmada Valley is classified as a rift valley. It was created by tectonic forces that caused a central block of the Earth's crust to subside between two parallel faults. This unique geological formation is why the Narmada flows westwards through a narrow, steep-sided depression, unlike most other peninsular rivers that follow the general slope towards the east.

NODIA

36. (A) Granitic rock in Bundelkhand limits percolation
The disparity in groundwater potential between the Malwa and Bundelkhand plateaus is due to their underlying geology. Bundelkhand is composed of hard, non-porous granitic and gneissic rocks that prevent rainwater from percolating into the deep aquifers. In contrast, the basaltic rocks of Malwa, while dense, often have fractures and vesicular structures that allow for better water storage and recharge.

37. (A) Vindhya and Satpura
Amarkantak is a unique geographical and religious site situated at the meeting point of two major mountain ranges: the Vindhya and the Satpura. This convergence creates a high-altitude plateau that serves as the source for several important rivers. Its location at this junction makes it a critical ecological and hydrological hub for the central part of the Indian subcontinent.

38. (D) Recurrent droughts and water scarcity
The Bundelkhand Plateau faces severe recurrent droughts and chronic water scarcity as its most significant climatic challenge. This is caused by a combination of erratic monsoon rainfall and the region's hard granitic geology, which results in high surface runoff and poor groundwater recharge. These conditions have historically led to agricultural distress and major challenges for local rural livelihoods.

39. (D) Vindhyan sequence
The Vindhyan rock sequence is globally famous for being the primary source of diamonds in India. Specifically, the Panna region of Madhya Pradesh contains diamondiferous pipes and

particularly coal. It serves as a transition between the central highlands and the plains of eastern India.

59. (C) Balaghat and Chhindwara
The Dharwar rock system is primarily found in the southern districts of Balaghat and Chhindwara in Madhya Pradesh. These rocks are highly significant as they are rich in metallic minerals such as manganese and copper. The Bharveli mine in Balaghat is one of the largest underground manganese mines in Asia, illustrating the economic importance of this specific geological formation to the state.

60. (B) Satpura Range
The Narmada and Tapti rivers both flow westwards through parallel rift valleys. These two major drainage systems are geographically separated by the Satpura Range. The Satpura mountains act as a central upland block that directs the Narmada to flow along its northern flank and the Tapti to flow along its southern flank, effectively partitioning the two distinct river basins in the state.

61. (C) Sigar peak
The Sigar peak is the highest point on the Malwa Plateau, reaching an elevation of approximately 881 meters. While much lower than the state's overall highest peak, Dhupgarh, it is a significant local landmark in the Indore region. Other notable peaks on the plateau include Janapav and Gajari, which contribute to the undulating topography of this vast volcanic landform.

62. (A) Accumulation of vegetation in deep tectonic faults
The coal reserves in eastern Madhya Pradesh were formed during the Gondwana period due to the massive accumulation of lush vegetation in deep tectonic faults or basins. Over millions of years, this organic matter was subjected to intense heat and pressure, transforming it into coal. This geological process occurred primarily in the Son and Damodar valley areas, creating extensive energy resources.

63. (A) Rivers flow through rugged terrain featuring gorges, rapids, and waterfalls
River navigation in Madhya Pradesh is severely restricted because the state's rivers flow through rugged, plateau-dominated terrain. This topography results in the frequent occurrence of deep gorges, rocky rapids, and steep waterfalls. These features create physical barriers that make commercial shipping and transportation impossible for most of the river courses, despite the substantial volume of water during the monsoon season.

64. (C) Son
The Johila River is an important tributary of the Son River. Like the Narmada and the Son, the Johila also originates from the Amarkantak plateau in the Anuppur district. It flows in a different direction initially before eventually merging with the Son River. Together, these rivers form a radial drainage pattern that is a unique hydrological feature of the Amarkantak highland region.

65. (C) It receives rainfall from both the major monsoon branches
The eastern part of Madhya Pradesh, specifically the Baghelkhand region, receives higher rainfall compared to the western Malwa region because it is influenced by both the Arabian Sea and the Bay of Bengal branches of the monsoon. The moisture from the Bay of Bengal branch reaches the eastern districts first and more intensely, leading to a significant increase in annual precipitation.

66. (A) I and II only
In the study of Madhya Pradesh's geology, two common misconceptions exist. First, while once thought to be barren, the Vindhyan rock system does contain trace evidence of ancient life. Second, the Deccan Trap volcanic rocks primarily cover the western and central parts of the state, not the entire eastern portion. The eastern part is dominated by Gondwana and Archean rocks.

67. (C) Chambal
The Chambal River serves as a prominent natural boundary between the states of Madhya Pradesh and Rajasthan. After originating near Mhow, it flows north and then turns northeast, forming a long stretch of the border. This river is crucial for the agricultural and hydroelectric needs of both states and is famous for the protected Chambal Sanctuary, home to gharials and dolphins.

Downloaded from www.pdf.tube

longest among the options provided, and the Tapti is the shortest of the four. Arranging them by their total length from longest to shortest gives the sequence of Narmada, Chambal, Son, and finally the Tapti river.

50. (C) Chambal system
The Northern Plains and the Gwalior Plateau region of Madhya Pradesh have been shaped primarily by the depositional and erosional activities of the Chambal river system. Over millennia, the Chambal and its tributaries have deposited sediments across these plains. The river's unique characteristic of forming deep ravines has also significantly modified the landscape in the northern districts of the state.

51. (D) Lower Chambal and Sindh basin areas
The lower reaches of the Chambal and Sindh river basins are highly susceptible to flooding during the monsoon. This is due to the flat topography of the plains as these rivers approach the Yamuna, combined with the heavy discharge from their upper catchments in the Malwa plateau. These floods can cause significant damage to the alluvial tracts in the northern districts.

52. (D) Black Soil
Black soil, also known as regur or black cotton soil, is the predominant soil type found across the Malwa Plateau. This is a direct result of the weathering of basaltic rocks formed by ancient volcanic eruptions. This soil is rich in minerals, possesses excellent moisture-retention properties, and is highly suitable for growing crops like cotton, soybean, and wheat in western MP.

53. (C) Coal
The Baghelkhand Plateau in eastern Madhya Pradesh is characterized by the presence of the Gondwana sedimentary sequence. This geological system is the primary source of coal in India. Consequently, the region, including districts like Singrauli and Shahdol, contains abundant coal reserves. These mines are vital for the state's economy and provide fuel for numerous thermal power plants in the region.

54. (C) It is formed by horizontal fissure-eruption lava flows
The landscape of the Malwa Plateau lacks highly elevated mountain peaks because it was formed by horizontal fissure-eruption lava flows. These eruptions covered the region with flat, successive layers of basalt rather than building up steep volcanic cones. Over time, erosion has further leveled the surface, resulting in an undulating plateau with few prominent heights compared to folded ranges.

55. (A) Mahanadi
The Chhattisgarh Plain, which extends into the eastern fringes of Madhya Pradesh, is geographically characterized as the upper basin of the Mahanadi River. This region serves as a transitional zone where numerous small streams collect to form the headwaters of the Mahanadi. It is a fertile area traditionally known for rice cultivation before the river flows eastward into the state of Odisha.

NODIA

56. (A) Malwa Plateau
The Malwa Plateau covers the largest geographical area among all the physical divisions of Madhya Pradesh. It spans across the western and central parts of the state, encompassing numerous districts. Its vast extent, fertile black soil, and moderate climate make it the most significant region for agriculture and industry, housing major cities like Indore, Bhopal, and Ujjain within its boundaries.

57. (A) Narmada
Kapildhara and Dugdhdhara are beautiful waterfalls located very close to the origin point of the Narmada River on the Amarkantak plateau. These represent the river's initial stages as it descends from the highland. The name "Dugdhdhara" refers to the milky appearance of the water as it plunges. They are significant religious and tourist sites within the Anuppur district of eastern MP.

58. (C) North-Eastern
The Baghelkhand Plateau is geographically positioned in the north-eastern part of Madhya Pradesh. It is bordered by the Son River to the north and the Maikal Hills to the south. This region is characterized by its rugged terrain, dense forest cover, and rich mineral resources,

between the volcanic basalt landscape of Malwa to the west and the ancient granitic terrain of Bundelkhand to the northeast. This escarpment also influences the drainage patterns and soil types in these two distinct regions.

78. (D) Dharwar System
The Sauser and Sikoli series are specific geological rock formations found in the southern part of Madhya Pradesh, primarily in the Balaghat and Chhindwara districts. These formations belong to the ancient Dharwar System, which is renowned for its rich deposits of metallic minerals. These rocks are highly metamorphosed and contain significant reserves of manganese, making them economically vital for the state.

79. (B) It empties into the Bay of Bengal
The Tapti River is one of the major westward-flowing rivers of the Indian peninsula. While it originates in the Betul district and flows through a rift valley, it does not empty into the Bay of Bengal. Instead, it flows across Maharashtra and Gujarat to empty into the Arabian Sea near the Gulf of Khambhat, just like the Narmada River located to its north.

80. (D) None of the above
The Sindh River is a significant northward-flowing river that originates in the Vidisha district of Madhya Pradesh. It travels across the central highlands to eventually join the Yamuna River in Uttar Pradesh. Along its course, particularly as it moves through the rugged edges of the plateau, it forms deep gorges. All descriptions provided regarding its origin and features are geographically accurate.

81. (B) The northern districts including Gwalior, Morena, and Bhind
The Central India Plateau, also known as Madhya Bharat Pathar, is a geographical region located in the northern part of the state. It encompasses districts such as Gwalior, Morena, Bhind, and Sheopur. This region is characterized by an undulating landscape with low hills and plains, significantly influenced by the Chambal river system and its extensive ravine formations, bordering the northern plains.

82. (B) Extreme West
The Rajpipla Hills form the westernmost part of the Satpura mountain range. They are located in the extreme western region of Madhya Pradesh, extending into the state of Gujarat. These hills are known for their rugged terrain and are separated from the central Mahadeo Hills by the Burhanpur Gap. They represent the first major elevation encountered when moving east from the coastal plains.

83. (D) Radial drainage where rivers flow outwards from a central high
The Amarkantak region is a classic example of a radial drainage pattern. Because the plateau acts as a central highland, several major rivers like the Narmada, Son, and Johila originate here and flow outwards in different cardinal directions. This unique hydrological feature is caused by the topographic dome-like structure of the plateau, which directs water towards various major drainage basins.

84. (C) Dhar
The Mahi River originates in the Dhar district of Madhya Pradesh, specifically near the village of Minda in the Vindhya Range. It is a unique river that flows northwards into Rajasthan before turning southwards and entering Gujarat to empty into the Arabian Sea. It is one of the few rivers in India that crosses the Tropic of Cancer twice during its course.

85. (C) Son
The Bansagar Dam is a major multipurpose river valley project constructed on the Son River. It is located in the Shahdol district of Madhya Pradesh. This project is a collaborative effort between the states of Madhya Pradesh, Uttar Pradesh, and Bihar. It provides essential water for irrigation and generates hydroelectricity, significantly boosting the agricultural and industrial development of the eastern state regions.

86. (B) Marble
The Bhedaghat gorge near Jabalpur is a world-famous geological site where the Narmada River has carved through massive magnesium limestone formations. These rocks are popularly known as the Marble Rocks. The river's erosive power over millions of years has created steep, shimmering white cliffs that rise up to a hundred

Click Here to Buy book on Amazon

68. (B) Kshipra
The historical and holy city of Ujjain is situated on the banks of the Kshipra River. This location is of immense spiritual significance in India, as the river is the site of the Simhastha Kumbh Mela, held every twelve years. The Kshipra is a tributary of the Chambal River and flows through the fertile Malwa plateau, supporting the religious life of the region.

69. (C) A is true but R is false.
The Malwa Plateau is known for its moderate and equitable climate, which is neither too hot in summer nor too cold in winter. While the plateau is indeed composed of basaltic rocks, the reason for its pleasant climate is primarily its elevation and geographical position rather than the specific heat-dissipating properties of its volcanic rocks. Therefore, the assertion is correct, but the reason is inaccurate.

70. (C) Narmada
The Narmada River is widely recognized as the "Lifeline of Madhya Pradesh." This title reflects its immense importance to the state's economy and ecology. It possesses the largest drainage basin in the state, providing vital water for irrigation, drinking, and a significant portion of the state's hydroelectric power. Its course through the state's center makes it a cultural and economic cornerstone.

71. (A) It sits on elevated sandstone hills of the Satpura range, supporting diverse flora and fauna
The Pachmarhi Biosphere Reserve is located on the elevated sandstone hills of the Satpura Range. Its unique high-altitude geography allows for the coexistence of diverse flora and fauna, including many species typical of both the Himalayan and Western Ghats regions. The rugged terrain, featuring deep ravines and dense forests, provides a protected habitat that makes it critical for ecological conservation.

72. (D) Gwalior Plateau - Over 1200 meters
While regions like Pachmarhi exceed 1000 meters in height, the Gwalior Plateau is significantly lower, with an average elevation typically ranging between 150 and 300 meters. Claiming it is over 1200 meters is geographically incorrect. The state's highest elevations are found in the Satpura range to the south, while the northern plateaus near the Yamuna plains have much lower altitudes.

73. (D) Narmada - Tawa
The Tawa River is the longest and most significant tributary of the Narmada River. It originates in the Mahadeo Hills and joins the Narmada from the left bank. Other pairs mentioned in the options are incorrect; for example, the Wainganga belongs to the Godavari system, and the Parbati is a tributary of the Chambal, demonstrating the complexity of the state's drainage basins.

NODIA

74. (C) It receives rainfall from both the major monsoon branches
The Baghelkhand region in eastern Madhya Pradesh experiences higher annual rainfall than the western Malwa region. This disparity occurs because the eastern districts are geographically positioned to receive moisture from both the Arabian Sea and the Bay of Bengal branches of the southwest monsoon. The convergence of these two moisture sources leads to more frequent and intense precipitation in the east.

75. (D) Godavari
The Kanhan and Pench rivers are significant streams originating in the southern part of Madhya Pradesh. They flow southwards into Maharashtra, where they eventually join the Wainganga and Wardha rivers. This entire network forms part of the Pranhita River system, which is a major component of the Godavari drainage system, the largest river system in peninsular India.

76. (D) Tapti
The Tapti River serves as a major natural boundary between the states of Madhya Pradesh and Maharashtra in the southern region. Originating from Betul, it flows westwards through a rift valley. Along its course, it defines several sections of the inter-state border before fully entering Maharashtra. It is one of the primary westward-flowing rivers that drain the southern slopes of the Satpura Range.

77. (D) Vindhyan Escarpments
The Malwa Plateau and the Bundelkhand Plateau are geographically separated by the Vindhyan Escarpments. These steep, cliff-like features of the Vindhyan Range act as a structural boundary

To its northeast lies the Bundelkhand Plateau, characterized by its ancient granitic rocks. Finally, the Baghelkhand Plateau is located in the easternmost part of the state. This arrangement reflects the state's transition from volcanic basalt to granitic and sedimentary landscapes.

97. (D) Vindhya Range in Sehore district
The Parbati River is a significant right-bank tributary of the Chambal River. It originates from the Vindhya Range in the Sehore district of Madhya Pradesh. After its birth, it flows northwards across the Malwa plateau, eventually entering the state of Rajasthan, where it joins the Chambal. The river is an important component of the drainage system that feeds the northern basins.

98. (A) Both Statement I and Statement II are true
The Kshipra River is indeed a major tributary of the Chambal River. It originates from the Kakri Bardi hills in the Indore district, which is a part of the Vindhya Range. Both statements are geographically accurate, describing its source and its relationship within the larger hydrological network of the Malwa plateau. The river's course is central to the historical city of Ujjain.

99. (B) Tapti Valley
The Satpura Range is a mountain system flanked by two major rift valleys. While the Narmada Valley forms its northern boundary, the Tapti Valley marks its southern boundary. These two valleys run parallel to each other, with the Satpura mountains acting as a massive elevated block between them. This structural arrangement is a defining feature of the topography of southern Madhya Pradesh.

100. (C) Chambal
The Chambal River is a classic example of superimposed drainage in the central highlands. This phenomenon occurs when a river maintains its original course even as it cuts through geological structures that are older than the river itself. As the land was uplifted, the Chambal continued to erode vertically, creating its famous deep ravines and maintaining its path despite the underlying rocks.

101. (A) The Baghelkhand region lacks significant coal reserves
Contrary to the claim that it lacks coal, the Baghelkhand region in eastern Madhya Pradesh is actually famous for its extensive coal reserves. It contains some of the state's most important coal mines within the Gondwana rock system. The other statements regarding the volcanic origin of Malwa, the Aravalli range's proximity, and the sedimentary nature of the Vindhyan system are accurate.

102. (A) Dhupgarh, Chauragarh, Amarkantak, Sigar
The highest peaks in Madhya Pradesh, in descending order of altitude, begin with Dhupgarh at 1350 meters, located in the Mahadeo Hills. This is followed by Chauragarh, also in the Satpura range. The Amarkantak plateau represents the next major high point at the meeting of ranges. Finally, the Sigar peak is the highest point on the Malwa Plateau, though it is lower.

NODIA

103. (B) Fluvial deposition by the Chambal and Yamuna river systems
The presence of extensive alluvial soils in northern Madhya Pradesh, particularly in districts like Bhind and Morena, is the result of fluvial deposition. Over long periods, the Chambal and Yamuna river systems have carried and deposited fine sediments from the highlands onto these plains. This process has created fertile agricultural land, which contrasts sharply with the basaltic and granitic soils elsewhere.

104. (D) Chambal basin
In Madhya Pradesh, the term "Badland topography" is exclusively associated with the Chambal River basin. This landscape is characterized by extreme gully erosion that has created a complex network of deep ravines. The soft alluvial soil of the region is easily washed away by rainwater, leaving behind a rugged, barren terrain that is unsuitable for farming and has historically provided significant cover.

105. (C) High surface runoff and low retention capacity of the shallow topsoil in degraded areas
Summer water scarcity in the Malwa plateau is primarily caused by high surface runoff and the low water-retention capacity of the soil in degraded areas. While the region receives decent monsoon rain, much of it flows away quickly

and Satpura plateaus, have been eroded over time and deposited in the valley. This soil is rich in clay and minerals, making it exceptionally fertile and ideal for the intensive cultivation of crops.

125. (A) P-3, Q-4, R-1, S-2
Mapping tributaries to their main rivers is essential for understanding regional hydrology. The Barna and Kolar are both significant tributaries that join the Narmada River. The Parbati is a major tributary of the Chambal River, flowing from the Vindhyas. Finally, the Johila River is a tributary of the Son River, both originating from the Amarkantak plateau, illustrating interconnected systems.

126. (A) A linear-shaped lowland between several highlands created by the action of a geologic fault
In the context of Madhya Pradesh, a rift valley is most accurately defined as a linear-shaped lowland situated between several highlands. It is created by tectonic activity where a block of the Earth's crust subsides along geologic faults. This is the exact structural feature that defines the courses of the Narmada and Tapti rivers, forcing them to flow westwards.

127. (B) Tawa
The Tawa River is the odd one out because it is a tributary that ends its course by joining the Narmada River within the peninsular drainage system. In contrast, the Ken, Tons, and Son rivers all eventually join the Yamuna or Ganga river systems, which drain into the Bay of Bengal. This distinction reflects the different terminal basins involved.

128. (D) Betwa
The inter-state boundary between Madhya Pradesh and Uttar Pradesh in the Bundelkhand region is marked significantly by the course of the Betwa River. Along various stretches of its northward journey, the river serves as a natural dividing line between the two states. This proximity makes the Betwa a crucial shared resource for irrigation and water management between the states.

129. (B) Chhattisgarh Plain
The Hasdeo River is a major tributary of the Mahanadi that passes through the Chhattisgarh Plain. This plain serves as a transitional region on the eastern fringes of Madhya Pradesh. The river's course through this fertile, low-lying area is vital for the local ecology and agriculture before it enters the main channel of the Mahanadi system in neighboring Chhattisgarh.

130. (A) It acts as a central water tower for diverse river systems
Madhya Pradesh is best summarized as a central water tower for India. Because of its elevated position in the heart of the country, it serves as the origin point for several major river systems that flow in all cardinal directions. These rivers feed into the Ganga-Yamuna, Narmada, Tapti, Godavari, and Mahanadi basins, making the state's hydrological health vital.

www.nodia.in

Downloaded from www.pdf.tube

Madhya Pradesh and contribute to the overall water volume that the Betwa carries into the Yamuna.

115. (D) Malwa Plateau
The Malwa Plateau serves as a major geographical transition zone in central India. Located between the northern plains and the Deccan Plateau to the south, it acts as a bridge between these two massive physiographic regions. Its elevation, climate, and volcanic geology distinguish it from the alluvial plains to the north and the more rugged peninsular terrain found further south.

116. (D) Siddha Baba peak
The Siddha Baba peak is the highest point of the Bundelkhand plateau, with an elevation of approximately 1172 meters. This peak is located in the Datia district. While the plateau is generally undulating with lower hills, this specific height stands out as a prominent landmark. It is much higher than the average elevation of the surrounding granitic landscape in the region.

117. (D) Ken
The Ken River is the primary water source for the Panna Biosphere Reserve. As it flows through the rugged terrain of the Vindhyan range, it carves deep gorges and forms the spectacular Pandav Falls. This river is known for its clear water and the presence of rare gemstones. Its ecological importance is paramount for the survival of the wildlife in Panna.

118. (D) Vindhyan Range
The Bhander and Kaimur ranges are the prominent eastern extensions of the Vindhyan Range. These ranges consist of a series of plateaus and steep escarpments that stretch across central and eastern Madhya Pradesh. They play a critical role in directing the flow of rivers like the Son and Tons and serve as a major continental water divide in the region.

119. (A) Hard, non-porous granitic rocks that prevent water percolation
The notoriously low groundwater potential in the Bundelkhand plateau is primarily due to its underlying geology of hard, ancient granitic and gneissic rocks. These crystalline rocks are non-porous and lack the fractures necessary to allow rainwater to seep deep into the earth. Consequently, most of the monsoon rain is lost as surface runoff, leading to chronic water shortages annually.

NODIA

120. (A) Tapti
Among the rivers listed, the Tapti is the odd one out based on its origin point. While the Narmada, Son, and Johila all originate from the Amarkantak plateau in the Anuppur district, the Tapti River originates from Multai in the Betul district. This geographic distinction separates the Tapti from the unique radial drainage system that characterizes the Amarkantak highland region.

121. (A) Kumra village hills
The Betwa River originates from the hills near Kumra village in the Raisen district of Madhya Pradesh. From this point in the Vindhya Range, it flows northward across the state before entering Uttar Pradesh. The river is culturally significant and is mentioned in ancient literature as the Vetravati. Its origin in the central highlands marks the beginning of an important system.

122. (D) Its central location and general slope towards the north and west
The Malwa Plateau acts as a critical continental water divide because of its central geographical position and its general slope. Rivers originating on its northern and eastern slopes, like the Chambal and Betwa, flow towards the Yamuna and Ganga. Meanwhile, the southwestern part of the plateau contributes to rivers like the Mahi, which drain westwards into the Arabian Sea system.

123. (C) Kaimur Range
The Ken River originates from the Kaimur Range in the Katni district of Madhya Pradesh. This range is part of the larger Vindhyan system. From its source, the river flows northwards through the rocky terrain of the Bundelkhand region, eventually joining the Yamuna River in Uttar Pradesh. The river is famous for its beauty and course through Panna National Park.

124. (B) Weathering of basaltic rocks from the Malwa and Satpura regions
The extensive deep black soils found in the Narmada valley are primarily the result of the weathering of basaltic rocks. These volcanic rocks, originating from the surrounding Malwa

(C) Elevated basaltic areas of the Malwa Plateau.
(D) Semi-arid districts of the northern Gird Region.

49. Match the climatic phenomenon in List-I with the key affected areas in Madhya Pradesh in List-II.
List I: (Climatic Phenomenon)
P. Highest Rainfall
Q. Lowest Rainfall
R. High Diurnal Range
S. Equable Climate
List II: (Key Affected Areas in MP)
1. Bhind
2. Pachmarhi
3. Malwa Plateau
4. Gwalior Region
(A) P-2, Q-1, R-4, S-3
(B) P-1, Q-2, R-3, S-4
(C) P-2, Q-3, R-1, S-4
(D) P-4, Q-1, R-2, S-3

50. Arrange the following districts in descending order of their vulnerability to floods during the monsoon season (Highest to Lowest vulnerability).
1. Hoshangabad (Narmadapuram)
2. Mandla
3. Indore
4. Bhind
Select the correct order:
(A) 2, 1, 3, 4
(B) 1, 4, 2, 3
(C) 1, 2, 4, 3
(D) 2, 3, 1, 4

51. The Urban Heat Island (UHI) effect is increasingly observed in major cities like Indore and Bhopal. Which of the following is NOT a contributing factor to this effect?
(A) Extensive use of concrete and asphalt in urban infrastructure
(B) Reduction in urban green spaces and water bodies
(C) High levels of vehicular and industrial emissions
(D) Widespread establishment of urban forestry projects

52. Which is the primary track of the Southwest Monsoon that brings the maximum amount of rainfall to Madhya Pradesh?
(A) The Arabian Sea branch
(B) The Mediterranean branch
(C) The Coromandel coast branch
(D) The Bay of Bengal branch

53. Which phenomenon is directly responsible for winter rainfall (Mawtha) in the northern and north-western regions of Madhya Pradesh?
(A) Tropical cyclones from the Bay of Bengal
(B) Local thunderstorms
(C) Western disturbances
(D) The onset of the Southwest Monsoon

54. The 'Loo' winds generally affect which districts of Madhya Pradesh the most?
(A) Balaghat and Mandla
(B) Chhindwara and Seoni
(C) Gwalior, Datia, and Bhind
(D) Alirajpur and Jhabua

55. Which specific geographical feature is responsible for the exceptionally high rainfall at Pachmarhi?
(A) Windward location on the Mahadeo hills.
(B) Bowl-shaped depression of the Malwa plateau.
(C) Proximity to the latitudinal Tropic of Cancer.
(D) Position in the path of western disturbances.

56. What is the approximate average annual rainfall of Madhya Pradesh as a whole?
(A) 112 cm
(B) 75 cm
(C) 150 cm
(D) 200 cm

57. Which sector suffers the most immediate economic damage due to severe cold wave and frost conditions in northern Madhya Pradesh?
(A) Agriculture (pulse and vegetable crops).
(B) Standard manufacturing industries.
(C) Regional hydropower generation.
(D) Inland commercial fisheries.

58. Consider the following statements about rainfall variability in Madhya Pradesh:
I. Rainfall variability is highest in the northern and western districts.

Click Here to Buy book on Amazon

CHAPTER 11
Climate

NODIA

1. How does the relief and altitude of the Satpura-Maikal range affect the local climate of the region?
(A) It reduces average annual rainfall levels significantly.
(B) It causes severe heat wave occurrences during winters.
(C) It creates permanent rain shadow zones in the east.
(D) It results in lower temperatures and higher rainfall.

2. The post-monsoon transition period in October is characterized by a temporary rise in temperature, which is commonly referred to as what?
(A) Pre-monsoon shower
(B) Loo
(C) October Heat
(D) Retreating cold wave

3. What is the primary reason for the continental nature of the climate observed in the northern plains of Madhya Pradesh?
(A) Proximity to the Thar Desert
(B) Absence of dense forest cover
(C) Significant distance from the sea
(D) High elevation of the Vindhyan range

4. Match the geographical areas in List-I with their average annual rainfall characteristics in List-II.
List I: (Geographical Areas)
P. Pachmarhi
Q. Bhind
R. Balaghat
S. Indore
List II: (Average Annual Rainfall Characteristics)
1. Above 190 cm
2. Less than 60 cm
3. Around 140-160 cm
4. Around 75-100 cm
(A) P-3, Q-2, R-1, S-4
(B) P-1, Q-4, R-3, S-2
(C) P-1, Q-2, R-3, S-4
(D) P-2, Q-1, R-4, S-3

5. During the summer season, the highest temperatures in Madhya Pradesh are generally recorded in which month?
(A) March
(B) May
(C) April
(D) June

6. Which factor is most responsible for the Malwa Plateau experiencing comparatively moderate summer nights compared to the northern plains?
(A) Its proximity to the Bay of Bengal
(B) Its elevation above mean sea level
(C) The high amount of winter rainfall it receives
(D) The presence of dense evergreen forests

7. The climate of Madhya Pradesh is primarily classified as which of the following types due to its geographic location?
(A) Tropical wet and dry climate
(B) Tropical Monsoon climate
(C) Mediterranean climate
(D) Semi-arid steppe climate

8. The Southwest Monsoon typically makes its onset in Madhya Pradesh around which time of the year?
(A) First week of May
(B) Mid-June
(C) First week of July
(D) First week of August

9. Pre-monsoon showers in Madhya Pradesh are generally caused by which phenomenon?
(A) Western disturbances originating from the Mediterranean.
(B) Local convectional atmospheric instability.
(C) Shifting of the ITCZ towards the equatorial regions.

rather than soaking into the ground. Additionally, the thin topsoil in many places cannot store enough moisture to last through the intense dry summer months.

106. (B) The Bundelkhand plateau has a uniform flat topography without any undulating terrain
The statement that the Bundelkhand plateau has a uniform flat topography is incorrect. In reality, the region features an undulating terrain with numerous low, rocky hills and ridges composed of ancient granite. This variation in height, though not mountainous, creates a rugged landscape that is quite different from a perfectly flat plain. The other descriptions of Malwa and Baghelkhand are generally accurate.

107. (A) Meandering course forming large oxbow lakes
The Narmada Valley is a structural rift valley where the river is confined between steep mountain ranges. Consequently, it does not typically form a meandering course or large oxbow lakes, which are features of rivers flowing slowly through wide, flat floodplains. Instead, the Narmada is characterized by its relatively straight path, deep gorges, and waterfalls, reflecting its unique geological confinement.

108. (B) It has poor agricultural significance due to entirely barren rocky terrain
Although the Tapti River flows through rugged terrain, its basin is not characterized by entirely barren or agriculturally insignificant land. In fact, many parts of the Tapti valley in the Nimar region and surrounding areas possess fertile soils that support significant agricultural activities. The other features, such as collecting water from the Satpuras and flowing through Burhanpur, are correct descriptions.

109. (B) III only
The assertion that the Eastern Plateau or Baghelkhand is the largest physical division of Madhya Pradesh is incorrect. The Malwa Plateau holds that distinction, covering nearly 28 percent of the state's total area. Other statements, such as the Central Highlands comprising the majority of the state and the Narmada-Son valley being the lowest part, are geographically accurate descriptions.

110. (C) It features numerous vertical drops and narrow gorges
The Narmada River is highly suitable for hydroelectric power generation because of its unique topography. As it flows through its rift valley, it encounters numerous steep vertical drops and narrow rocky gorges. These features allow for the efficient construction of large dams and the generation of power from high-velocity water. However, these same rocky obstacles and waterfalls make the river non-navigable.

111. (D) It originates in the Betul district and flows southwards
The Wardha River originates in the Betul district of Madhya Pradesh. It flows in a southward direction before entering Maharashtra. It eventually joins the Wainganga River to form the Pranhita River, which is a major tributary of the Godavari. Therefore, the Wardha is an important part of the southward-draining system of the state, connecting the central highlands to peninsular networks.

112. (B) Sindh
The Kwari River is a significant stream flowing through the northern districts of Madhya Pradesh. It is a major tributary of the Sindh River. After traveling through the undulating plains of the northern region, it eventually merges with the Sindh, which then carries the water into the Yamuna River. This entire drainage system is part of the larger Ganga basin system.

113. (C) Sandstones and Shales of Vindhyan system
The Gwalior Plateau is geologically composed primarily of sandstones and shales belonging to the Vindhyan rock system. These sedimentary rocks provide the plateau with its characteristic flat-topped hills and steep escarpments. This geological foundation is also responsible for the building materials used in the region's historical architecture, including the famous Gwalior Fort, perched on a massive sandstone outcrop.

114. (B) Betwa
The Bina, Dhasan, and Jamni rivers are all prominent tributaries of the Betwa River. They drain various parts of the Malwa and Bundelkhand plateaus before joining the main channel of the Betwa. These rivers are essential for the irrigation systems in central and northern

Downloaded from www.pdf.tube

(A) Gwalior, Bhopal, Jabalpur, Balaghat
(B) Bhopal, Balaghat, Gwalior, Jabalpur
(C) Jabalpur, Gwalior, Balaghat, Bhopal
(D) Balaghat, Jabalpur, Bhopal, Gwalior

20. Consider the following statements regarding the temperature variations in Madhya Pradesh:
I. The eastern part of the state experiences higher summer temperatures than the western part.
II. The northern part experiences greater annual temperature ranges than the southern part.
III. The Tropic of Cancer acts as a prominent temperature divide during summer.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II, and III

21. During winter, which part of Madhya Pradesh experiences the most severe temperature drop?
(A) South-eastern districts near the state border.
(B) South-western districts near the Malwa plateau.
(C) Northern and north-western districts.
(D) Central districts around the capital region.

22. According to Koppen's classification, the northern plains of Madhya Pradesh are best represented by which climatic type?
(A) Aw
(B) Cwg
(C) BWhw
(D) Dfc

23. The summer season in Madhya Pradesh generally extends over which of the following periods?
(A) Mid-February to Mid-April
(B) May to August
(C) April to September
(D) March to Mid-June

24. In which region of Madhya Pradesh are pre-monsoon showers least likely to occur?
(A) The south-eastern districts near Chhattisgarh.
(B) The central Mahakoshal region near Jabalpur.
(C) Highlands of the Satpura-Maikal mountain range.
(D) Northern districts like Morena and Bhind.

NODIA

25. The duration of the Southwest Monsoon in Madhya Pradesh is approximately how many days?
(A) 45 to 60 days
(B) 100 to 120 days
(C) 70 to 90 days
(D) 150 to 180 days

26. The continental climate in regions like Gwalior and Morena is characterized by which of the following?
(A) Consistent moderate temperatures throughout the year
(B) Sustained high humidity levels and heavy rainfall
(C) Minimal diurnal temperature ranges during the summer
(D) Extreme heat in summer and extreme cold in winter

27. Consider the regional variation in summer temperatures across Madhya Pradesh. Which region is known to record consistently high daytime temperatures due to its rocky topography and lack of dense vegetation?
(A) Bundelkhand Plateau
(B) Narmada-Son Valley
(C) Malwa Plateau
(D) Satpura Range

28. Match the climatic features or seasons in List-I with their corresponding local terms in List-II.
List I: (Climatic Features/Seasons)
P. Summer Season
Q. Winter Season
R. Rainy Season
S. Winter Rainfall
List II: (Local Terms in MP)
1. Mawtha
2. Chaumasa
3. Unala
4. Siyala
(A) P-3, Q-4, R-2, S-1
(B) P-4, Q-3, R-1, S-2
(C) P-3, Q-2, R-4, S-1
(D) P-2, Q-4, R-3, S-1

(D) Retreating monsoon winds during the late autumn season.

10. In local terminology, the summer season in Madhya Pradesh is traditionally known as which of the following?
(A) Siyala
(B) Chaumasa
(C) Unala
(D) Mawtha

11. The following question consists of two statements, an Assertion (A) and a Reason (R). Select the correct answer using the codes given below:
Assertion (A): The diurnal range of temperature in Madhya Pradesh is highest during the month of March.
Reason (R): March marks the transition between winter and summer, characterized by clear skies, dry air, and high insolation.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

12. Under the Koppen climate classification system, the southern parts of Madhya Pradesh, including the Narmada Valley, generally fall under which category?
(A) BShw (Semi-arid)
(B) Cwg (Monsoon type with dry winter)
(C) Aw (Tropical Savanna)
(D) Amw (Tropical monsoon with short dry season)

13. The withdrawal of the Southwest Monsoon from Madhya Pradesh usually begins in which month?
(A) Late October
(B) Late August
(C) Mid-September
(D) Mid-November

14. Which of the following best describes the characteristics of the winter season in Madhya Pradesh?
(A) High humidity, heavy rainfall, and warm nights
(B) Continuous overcast skies with extreme snowfall
(C) Cloudless skies, low humidity, and pleasant days
(D) Strong hot winds with high diurnal temperature variations

15. Identify the correct/incorrect pair regarding extreme temperature locations in Madhya Pradesh.
(A) Highest temperature recorded - Ganjbasoda (Vidisha)
(B) Lowest temperature recorded - Shivpuri
(C) Highest diurnal temperature range - Northern MP
(D) Most equable summer temperature - Gwalior

16. Which significant geographical line passes almost through the middle of Madhya Pradesh, heavily influencing its summer temperatures?
(A) Tropic of Cancer
(B) Tropic of Capricorn
(C) Equator
(D) Standard Meridian of India

17. What is a significant agricultural benefit of the pre-monsoon showers in the state?
(A) Softening the soil for early Kharif preparation.
(B) Ensuring complete maturation of standing Rabi crops.
(C) Providing primary irrigation for winter wheat fields.
(D) Preventing harmful frost in the northern districts.

18. Identify the incorrect statement regarding the factors affecting the climate of Madhya Pradesh.
(A) Aravalli range blocks all Arabian Sea branch moisture.
(B) State landlocking increases temperature extremes north.
(C) Higher altitude areas like Pachmarhi are always cooler.
(D) Bay of Bengal branch provides most eastern rainfall.

19. Arrange the following regions in the correct order based on the sequence of normal monsoon onset from earliest to latest.

Click Here to Buy book on Amazon

(B) Kalbaisakhi
(C) Chinook
(D) Loo

40. Identify the odd one out among the following districts based on their susceptibility to high rainfall variability and drought.
(A) Jhabua
(B) Barwani
(C) Alirajpur
(D) Umaria

41. Consider the following statements regarding the impact of deforestation on the local climate in Madhya Pradesh:
I. It leads to a reduction in local evapotranspiration, thereby reducing atmospheric humidity.
II. It increases the surface albedo, potentially causing higher localized heating.
III. It results in an increase in the water table due to reduced root absorption.
IV. It exacerbates soil erosion and surface runoff during heavy monsoons.
Which of the above statement(s) is/are correct?
(A) I, II, and IV only
(B) I, II, and III only
(C) II, III, and IV only
(D) I, III, and IV only

42. Consider the following statements regarding rainfall in Madhya Pradesh:
Statement I: The eastern region of Madhya Pradesh receives an average annual rainfall exceeding 120 cm.
Statement II: The western region of Madhya Pradesh receives an average annual rainfall below 75 cm.
Choose the correct option.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

43. Bhind (specifically Gohad) is known for receiving the lowest rainfall in Madhya Pradesh. What is the approximate average annual rainfall here?
(A) 25 cm
(B) 55 cm
(C) 85 cm
(D) 105 cm

44. The winter rainfall (Mawtha) is considered highly beneficial for which of the following crop types in Madhya Pradesh?
(A) Kharif crops like Soybean
(B) Zaid crops like Watermelon
(C) Plantation crops like Coffee
(D) Rabi crops like Wheat and Gram

45. The phenomenon of temperature inversion during winter nights in the valleys of Madhya Pradesh leads to the formation of:
(A) Intense heat waves
(B) Hailstorms
(C) Fog and frost
(D) Pre-monsoon showers

46. High rainfall in the eastern parts of Madhya Pradesh is primarily attributed to which geographical feature?
(A) The flat plains allowing unrestricted wind movement
(B) The orographic effect of the Maikal and Vindhyan ranges
(C) The presence of the Aravalli range
(D) The direct impact of western disturbances

47. Which of the following best defines the condition for declaring a 'Heat Wave' in the plains of Madhya Pradesh by the IMD?
(A) Maximum temperature reaching at least 35°C seasonally.
(B) Max temp ≥40°C with departure of 4.5°C to 6.4°C.
(C) Minimum nighttime temperature exceeding 30°C daily.
(D) No rainfall for 60 consecutive days during the summer.

48. The region where the Arabian Sea branch and the Bay of Bengal branch of the monsoon merge in Madhya Pradesh is:
(A) Low-lying regions of the Chambal Valley.
(B) Central and Eastern Vindhya-Satpura ranges.

Downloaded from www.pdf.tube

29. Which statement accurately describes the Retreating Monsoon season in Madhya Pradesh?
(A) It brings heavy and continuous rainfall to the entire state.
(B) It is marked by a sudden decrease in daytime temperatures and high cloud cover.
(C) It brings clear skies, decreasing humidity, and a gradual drop in night temperatures.
(D) It is characterized by violent cyclonic storms originating in the Arabian Sea.

30. Which region of Madhya Pradesh generally experiences the lowest minimum temperatures and severe cold waves during winter?
(A) Southern Nimar Plains
(B) Central Malwa Plateau
(C) Eastern Baghelkhand Plateau
(D) Northern districts (Gird region)

31. The Arabian Sea branch of the Southwest Monsoon primarily affects which part of Madhya Pradesh?
(A) Rewa-Panna plateau
(B) Baghelkhand region
(C) Nimar and Malwa regions
(D) Bundelkhand region

32. What is the primary meteorological reason for the extremely low rainfall in the Gwalior and Bhind regions?
(A) Location in the rain shadow of the Satpura range.
(B) Monsoon winds are exhausted of moisture by arrival.
(C) Permanent high-pressure systems during the summer.
(D) Dense forests preventing cloud condensation levels.

33. The northern and western parts of Madhya Pradesh fall into the low rainfall category mainly because:
(A) They are situated in the rain shadow area of the Western Ghats range.
(B) Monsoon winds lose moisture by the time they reach these regions.
(C) They are highly urbanized, which effectively repels rain-bearing clouds.
(D) They receive rainfall exclusively from the retreating winter monsoon.

34. Cold wave conditions in Madhya Pradesh are primarily triggered by which atmospheric event?
(A) The onset of the northeast monsoon from the Bay of Bengal
(B) Rapid terrestrial radiation from the dense forests of Satpura
(C) Localized thunderstorms in the Malwa plateau
(D) Inflow of cold, dry winds from the snow-clad Himalayan region

35. Western disturbances originate over which water body before traveling towards the Indian subcontinent and affecting Madhya Pradesh?
(A) Mediterranean Sea
(B) Arabian Sea
(C) Bay of Bengal
(D) Caspian Sea

36. Which of the following represents a noticeable impact of climate change on the monsoon patterns in Madhya Pradesh over recent decades?
(A) Short intense rainfall spells with long dry spells.
(B) Overall increase in the number of annual rainy days.
(C) Complete failure of the moisture-heavy Bay of Bengal branch.
(D) Monsoon season shifting entirely to the winter months.

37. Which of the following districts is NOT categorized under the high rainfall zones of eastern Madhya Pradesh?
(A) Neemuch
(B) Mandla
(C) Dindori
(D) Anuppur

NODIA

38. Pachmarhi is recorded as the wettest place in Madhya Pradesh. What is its approximate average annual rainfall?
(A) 120 cm
(B) 150 cm
(C) 250 cm
(D) 200 cm

39. The scorching, dry, and dusty summer wind that blows across the northern and central parts of Madhya Pradesh is known locally as:
(A) Mango Shower

II. High rainfall variability often correlates with a higher frequency of droughts.
III. The south-eastern districts experience the highest rainfall variability in the state.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II, and III

59. During the summer season, what is the predominant direction of winds blowing over Madhya Pradesh?
(A) North-easterly
(B) South-easterly
(C) South-westerly
(D) North-westerly

60. What is the primary cause of frequent floods in the Hoshangabad (Narmadapuram) and adjoining regions during the monsoon season?
(A) Rapid seasonal melting of remote Himalayan glaciers.
(B) High volume Narmada discharge from heavy rainfall.
(C) Intense cyclonic storms originating in the Arabian Sea.
(D) Sustained backflow of water from the Chambal river.

61. Where is the principal climatic observatory and data recording station of Madhya Pradesh located, which is also the only one in the state established during the British era by Parsis?
(A) Bhopal
(B) Jabalpur
(C) Indore
(D) Gwalior

62. The diurnal range of temperature is defined as:
(A) The difference between the highest and lowest temperatures recorded in a single day.
(B) The average temperature of a day compared to the average of the month.
(C) The difference between the maximum summer temperature and minimum winter temperature.
(D) The rate at which temperature drops during the night.

63. The Nimar plains agro-climatic zone is uniquely suited for the cultivation of which major cash crop?
(A) Cotton
(B) Jute
(C) Tea
(D) Saffron

64. Consider the following statements about the climate of the Satpura-Maikal region:
I. It acts as a major watershed and receives high rainfall.
II. Pachmarhi and Amarkantak are located in this climatic zone.
III. It experiences extreme heat waves with temperatures crossing 48°C frequently.
IV. It is covered largely by moist deciduous forests due to its climate.
Which of the above statement(s) is/are correct?
(A) I, II, and IV only
(B) II, III, and IV only
(C) I, III, and IV only
(D) I, II, III, and IV

65. Which of the following regions of Madhya Pradesh has a climate that is classified as 'Sub-tropical' due to its latitudinal position?
(A) Central India Plateau (Madhya Bharat Pathar)
(B) Narmada Valley
(C) Satpura Range
(D) Baghelkhand Plateau

66. How does the 'Distance from the Sea' factor specifically affect the climate of Madhya Pradesh compared to coastal states like Maharashtra?
(A) It causes Madhya Pradesh to have a highly variable and extreme climate.
(B) It leads to smaller annual temperature variations in Madhya Pradesh.
(C) It ensures Madhya Pradesh receives year-round rainfall.
(D) It prevents the occurrence of any thunderstorms in the state.

67. For agricultural planning, Madhya Pradesh has been divided into how many distinct agro-climatic zones?
(A) 5
(B) 9
(C) 11

Click Here to Buy book on Amazon

124. The highest temperature zones in summer and the lowest temperature zones in winter in Madhya Pradesh overlap primarily in which geographical area?
(A) Satpura-Maikal region
(B) Gird Region (Northern Madhya Pradesh)
(C) Central Narmada Valley
(D) South-Eastern Baghelkhand

125. Match the climatic regions in List-I with their average summer maximum temperature ranges in List-II.
List I: (Climatic Regions)
P. Northern Plains
Q. Malwa Plateau
R. Pachmarhi Hills
S. Narmada Valley
List II: (Average Summer Maximum Temperature Range)
1. 30°C to 35°C
2. 40°C to 45°C
3. 38°C to 42°C
4. 42°C to 45°C+ (Very Hot)
(A) P-4, Q-3, R-1, S-2
(B) P-4, Q-1, R-3, S-2
(C) P-2, Q-3, R-1, S-4
(D) P-1, Q-2, R-4, S-3

126. Which among the following acts as the primary climatic divide in Madhya Pradesh, separating the northern plains from the peninsular plateau climate?
(A) The Vindhyan Range
(B) The Chambal River
(C) The Betwa River
(D) The Aravalli Range

127. Consider the following statements regarding the Retreating Monsoon in Madhya Pradesh:
I. It generally occurs during the months of October and November.
II. It marks a period of transition from a hot, rainy season to dry, cool winter conditions.
III. It brings heavier rainfall to Madhya Pradesh than the Southwest Monsoon.
IV. The skies are generally clear during this period.
V. It is characterized by high humidity levels initially, leading to oppressive heat.
Which of the above statement(s) is/are correct?
(A) I, II, III, and V
(B) I, II, IV, and V
(C) II, III, IV, and V
(D) I, III, IV, and V

128. The phenomenon where temperature increases with altitude, rather than decreasing, frequently observed in the valleys of Madhya Pradesh during calm winter nights, is known as:
(A) Temperature lapse
(B) Heat island effect
(C) Albedo effect
(D) Temperature inversion

129. Which local term is often associated with the intense thunderstorms that accompany pre-monsoon showers in some parts of Madhya Pradesh?
(A) Loo
(B) Aandhi
(C) Siyala
(D) Chaumasa

130. The 75 cm isohyet line passing through Madhya Pradesh is considered crucial because it broadly separates the regions of:
(A) Wheat cultivation in the west and Rice cultivation in the east
(B) Soybean cultivation in the east and Cotton in the north
(C) Evergreen forests in the west and thorny scrubs in the east
(D) Frost-prone areas in the south and frost-free areas in the north

NODIA

STUDYING FROM PDFs?

THINK AGAIN.

If you are studying only from PDFs,
you are wasting valuable time.

Research shows that learning from

PRINTED BOOKS has up to

4× HIGHER RETENTION

than studying from screens.

PRINT BOOK = BETTER MEMORY

PDF = LOWER RETENTION

Those who study from **PRINTED BOOKS**
move **AHEAD.**

Others are left **BEHIND**
in competition.

In competitive exams,
being average is not enough.

STAY ONE STEP AHEAD.

78. Which statement is correct regarding the distribution of rainfall across Madhya Pradesh?
(A) Rainfall consistently increases from south to north.
(B) Rainfall consistently increases from east to west.
(C) Rainfall is uniformly distributed across all districts of the state.
(D) Rainfall generally decreases from east to west and from south to north.

79. Why is the diurnal temperature range generally lowest during the monsoon season (Chaumasa) in Madhya Pradesh?
(A) Because the days are shorter than the nights.
(B) Cloud cover and humidity moderate the diurnal variations.
(C) Cold winds from the south stabilize the local temperature.
(D) The Sun is furthest from the Earth during this season.

80. Match the agro-climatic zones in List-I with the dominant crop suitability in List-II.
List I: (Agro-climatic Zones of MP)
P. Kymore Plateau & Satpura Hills
Q. Malwa Plateau
R. Nimar Valley
S. Gird Region
List II: (Dominant Crop Suitability)
1. Cotton and Sorghum
2. Wheat and Sugarcane
3. Rice and Wheat
4. Soybean and Wheat
(A) P-4, Q-3, R-2, S-1
(B) P-1, Q-2, R-3, S-4
(C) P-3, Q-1, R-4, S-2
(D) P-3, Q-4, R-1, S-2

81. In the context of Madhya Pradesh's climate, what is the significance of the 21°C isotherm drawn during the month of January?
(A) Divides the state based on annual rainfall exceeding 100 cm.
(B) Defines the boundary of frost-prone agricultural zones.
(C) Divides the state into cooler northern and warmer southern halves.
(D) Marks the absolute minimum temperature recorded in the state.

82. During the winter season, which part of Madhya Pradesh experiences the maximum occurrence of fog and mist?
(A) The Narmada Valley and northern river plains
(B) The crest of the Satpura mountains
(C) The arid districts of Jhabua and Alirajpur
(D) The southern districts bordering Maharashtra

83. The 'Vindhyan Escarpments' largely affect the local climate by acting as a barrier to which winds?
(A) Retreating monsoon winds arriving from the northeast.
(B) Hot and dry Loo winds entering from the Rajasthan side.
(C) Frigid cold waves moving southwards from the Himalayas.
(D) Rain-bearing Arabian Sea branch winds moving northwards.

84. The term 'Meteorological Drought' in the context of Madhya Pradesh is defined by the Indian Meteorological Department as a situation when the seasonal rainfall over an area is less than its long-term average by at least:
(A) 10%
(B) 50%
(C) 25%
(D) 75%

85. Which statement correctly identifies the influence of the Narmada Rift Valley on the climate of its surrounding areas?
(A) Trapping cold air in winter, preventing temperature drops.
(B) Acting as a complete barrier to the Bay of Bengal branch.
(C) Channeling the Arabian Sea branch moisture into the state.
(D) Creating a high-pressure zone that repels annual rainfall.

86. Identify the most appropriate answer: High evaporation rates during the summer in the arid northern districts of Madhya Pradesh require farmers to rely heavily on:
(A) Shifting cultivation
(B) Micro-irrigation and groundwater resources
(C) Rainfed agriculture only

Downloaded from www.pdf.tube

(D) Terrace farming techniques

87. Consider the following statements regarding the winter climate in Madhya Pradesh:
Statement I: The southern districts of Madhya Pradesh experience a more moderate winter compared to the northern districts.
Statement II: The proximity to the equator and lesser continental effect keep the southern districts relatively warmer in winter.
Choose the correct option.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

88. Select the correct order of the following districts based on their average annual rainfall, from highest to lowest.
(A) Bhind, Ujjain, Hoshangabad, Mandla
(B) Mandla, Hoshangabad, Ujjain, Bhind
(C) Ujjain, Bhind, Mandla, Hoshangabad
(D) Mandla, Bhind, Hoshangabad, Ujjain

89. Which climate-related disaster is historically most frequent in the Bundelkhand region of Madhya Pradesh?
(A) Flash Floods
(B) Droughts
(C) Cyclones
(D) Avalanches

90. Which of the following crops is highly susceptible to frost damage during severe winter nights in the northern agro-climatic zones of Madhya Pradesh?
(A) Gram (Chickpea)
(B) Wheat
(C) Mustard
(D) Sugarcane

91. The phenomenon of 'October Heat' in Madhya Pradesh is caused by:
(A) The sudden onset of dry Loo winds arriving from Rajasthan.
(B) Insolation on waterlogged soil raising temperature and humidity.
(C) Premature shifting of the sun towards the southern hemisphere.
(D) The arrival of intense tropical cyclones from the Bay of Bengal.

NODIA

92. Which climatic zone of Madhya Pradesh experiences the longest duration of the summer season?
(A) Narmada Valley
(B) Malwa Plateau
(C) Gird (Northern) Plains
(D) Satpura-Maikal range

93. What is the cause of the sudden drop in temperature observed across Madhya Pradesh during the months of December and January?
(A) The onset of the southwest monsoon
(B) The shifting of the Inter Tropical Convergence Zone (ITCZ) northwards
(C) The passage of western disturbances followed by cold winds from the north
(D) Intense local evaporation

94. A prominent shift in cropping patterns in the Malwa region—from traditional coarse grains to commercial crops like Soybean—has been facilitated largely by:
(A) The complete eradication of the traditional monsoon season.
(B) The artificial creation of permafrost in the northern zones.
(C) Dependable rainfall and moisture-retaining black soils.
(D) High incidence of winter rainfall exceeding monsoon rainfall.

95. What impact does the presence of dense forests in the Satpura and Maikal ranges have on the local microclimate?
(A) Sustained increases in the mean annual local temperature.
(B) Lowering local daytime temperatures and increasing precipitation.
(C) Significant reduction in local annual evapotranspiration.
(D) Complete halting of wind movement, creating arid pockets.

96. Arrange the following agro-climatic zones of Madhya Pradesh in order of increasing average annual rainfall (Lowest to Highest).

1. Grid Region (Northern Plains)
2. Malwa Plateau
3. Chhattisgarh Plains (Balaghat area)
4. Nimar Valley

Select the correct sequence from the options below:
(A) 1, 4, 2, 3
(B) 4, 1, 2, 3
(C) 1, 2, 4, 3
(D) 2, 1, 3, 4

97. A farmer in the Baghelkhand plateau relies heavily on which monsoon branch for rainfed agriculture?
(A) Arabian Sea branch moisture.
(B) Mediterranean disturbances.
(C) Northeast retreating monsoon.
(D) Bay of Bengal branch rains.

98. In terms of percentage, the winter rainfall (Mawtha) contributes approximately how much to the total annual rainfall of Madhya Pradesh?
(A) 2% to 5%
(B) 10% to 15%
(C) 20% to 25%
(D) Over 30%

99. The Indian Meteorological Department relies on a network of AWS across Madhya Pradesh to record climate data. What does AWS stand for?
(A) Atmospheric Warning Systems
(B) Automated Weather Stations
(C) Annual Weather Surveys
(D) Airborne Wind Sensors

100. In the context of the Southwest Monsoon in Madhya Pradesh, the term 'Monsoon Break' refers to:
(A) The permanent withdrawal of the monsoon in late October.
(B) The initial violent onset of localized monsoon showers.
(C) A dry spell of several days during the monsoon season.
(D) Heavy, uninterrupted rainfall leading to regional floods.

101. The following question consists of two statements, an Assertion (A) and a Reason (R). Select the correct answer using the codes given below:
Assertion (A): The district of Jhabua frequently faces severe drought conditions.
Reason (R): Jhabua is situated in the westernmost part of the state where monsoon winds from both branches are mostly exhausted of moisture by the time they arrive.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

102. The following question consists of two statements, an Assertion (A) and a Reason (R). Select the correct answer using the codes given below:
Assertion (A): The Malwa Plateau is famously described by historical travelers as having the "best climate in the world."
Reason (R): The Malwa Plateau receives rainfall exclusively from the retreating monsoon, ensuring year-round mild temperatures.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

103. The agricultural practice of mixed farming in the Bundelkhand region is primarily a localized adaptation to:
(A) Extremely high annual rainfall
(B) High unreliability and variability of rainfall
(C) Extremely fertile alluvial soil
(D) Dense forest cover limiting farm size

104. Which of the following regions of Madhya Pradesh lies in the rain shadow of the Satpura range, contributing to its lower rainfall profile?
(A) Baghelkhand plateau
(B) Rewa-Panna plateau
(C) Northern part of the Central India plateau
(D) Southern parts of Nimar (Khargone/ Khandwa)

105. The phenomenon of climate change in Madhya Pradesh is currently being manifested through which of the following?
(A) Gradual transformation of the state into a

Click Here to Buy book on Amazon

(D) 15

68. In agricultural practices in Madhya Pradesh, what local method is traditionally used by farmers to protect crops from frost during extreme cold waves?
(A) Applying saline solutions to the surface of crops.
(B) Creating artificial smoke covers over fields at night.
(C) Premature harvesting of crops to avoid cold damage.
(D) Continuous flooding of fields with cold river water.

69. What is the fundamental difference between the rainfall received in the Gird region and the Mahakoshal region?
(A) Mahakoshal receives more rain due to orographic effects.
(B) Gird region receives rainfall primarily from western disturbances.
(C) Gird region maintains consistent rainfall throughout the year.
(D) Gird receives rain from retreating monsoons during the winter.

70. Which isohyetal line (imaginary line connecting points of equal rainfall) roughly divides Madhya Pradesh into an eastern higher rainfall zone and a western lower rainfall zone?
(A) 40 cm isohyet
(B) 60 cm isohyet
(C) 75 cm isohyet
(D) 120 cm isohyet

71. The lowest temperature ever recorded in Madhya Pradesh was observed at which of the following stations?
(A) Shivpuri
(B) Pachmarhi
(C) Umaria
(D) Datia

72. The highest relative humidity in Madhya Pradesh is typically recorded during which month?
(A) January
(B) August
(C) May
(D) November

73. Identify the incorrect statement regarding the monsoon withdrawal phase in Madhya Pradesh.
(A) It is characterized by the southward shifting of the monsoon trough.
(B) The weather becomes sultry due to high temperatures and receding humidity.
(C) It occurs primarily during the months of September and October.
(D) It brings the maximum amount of rainfall to the western districts.

74. Droughts in the western districts of Madhya Pradesh (like Jhabua, Dhar, Barwani) are primarily caused by:
(A) Over-exploitation of local deep-aquifer groundwater.
(B) Large-scale historical deforestation in the Western Ghats.
(C) Rain-shadow location and moisture exhaustion of winds.
(D) Complete absence of perennial river networks in the region.

NODIA

75. Which of the following is NOT an agro-climatic zone of Madhya Pradesh?
(A) Chhattisgarh Northern Hills
(B) Vindhya Plateau
(C) Malwa Plateau
(D) Marathwada Plains

76. Which agro-climatic zone in Madhya Pradesh is considered most suitable for the cultivation of Soybean due to its moderate rainfall and moisture-retentive black soil?
(A) Bundelkhand Region
(B) Chhattisgarh Plains (Balaghat area)
(C) Gird Region
(D) Malwa Plateau

77. Which of the following is an observed impact of increasing urban heat islands (UHI) on the micro-climate of cities like Bhopal and Indore?
(A) Pronounced decrease in average summer nighttime temperatures.
(B) Complete elimination of winter fog due to thermal heating.
(C) Significant reduction in the overall annual evaporation rates.
(D) Increased local thunderstorms and altered rainfall patterns.

(D) Barwani

116. The highest recorded temperature in Madhya Pradesh (approximately 48.7°C) was measured at which location in 1995?
(A) Gwalior
(B) Khajuraho
(C) Nowgong
(D) Ganjbasoda (Vidisha)

117. Which of the following explains why the eastern part of Madhya Pradesh (like Balaghat and Mandla) receives more rainfall than the western part (like Jhabua)?
(A) Eastern MP is directly in the path of the retreating monsoon season.
(B) Western MP is heavily forested, which effectively deflects rain clouds.
(C) The Western Ghats block the Bay of Bengal branch from reaching the west.
(D) Moisture from both branches aided by orographic lift.

118. Match the climatic zones in List-I with their key geographical region descriptions in List-II.
List I: (Climatic Zones of MP)
P. Northern Plains
Q. Vindhyan Hilly Region
R. Narmada Valley
S. Malwa Plateau
List II: (Key Geographical Region)
1. Sub-tropical climate with extremes
2. Equable climate with moderate extremes
3. Hot summers and normal winters
4. Moderate summers and cool winters
(A) P-2, Q-3, R-4, S-1
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-1, R-2, S-3
(D) P-1, Q-4, R-3, S-2

119. Which among the following causes flash floods in the river valleys of western Madhya Pradesh despite the region having generally low average rainfall?
(A) High-intensity, short-duration localized cloudbursts.
(B) Sudden outbursts from high-altitude glacial mountain lakes.
(C) Perennial snowmelt from the nearby Vindhyan mountain ranges.
(D) Continuous light drizzle sustained over several rainy months.

NODIA

120. Deforestation in the central Narmada basin has been linked by climatologists to which of the following observed phenomena?
(A) Rise in temperatures and reduction in soil moisture retention.
(B) Increased frequency of winter rainfall during western disturbances.
(C) Substantial increase in the frequency of western disturbances.
(D) Permanent shifting of the latitudinal Tropic of Cancer line.

121. Which of the following is an effective long-term agricultural response to the high evaporation rates and variable rainfall in western Madhya Pradesh?
(A) Watershed management and drought-resistant seed varieties.
(B) Promoting flood irrigation methods in semi-arid environments.
(C) Shifting completely to water-intensive industrial cash crops.
(D) Abandoning agriculture and shifting to heavy urban industries.

122. Identify the correct statement regarding crop suitability based on the climate of the Gird region.
(A) It is highly suitable for water-intensive crops like Rice and Sugarcane.
(B) It is the sole producer of Coffee in the state due to its cool climate.
(C) The region cannot support any agriculture due to permanent permafrost.
(D) Suited for water-efficient crops like Mustard and Sorghum.

123. According to the state's climate data, the monsoon trough line often passes through Madhya Pradesh. When this trough shifts northwards towards the Himalayan foothills, what weather condition prevails in Madhya Pradesh?
(A) Continuous torrential rainfall
(B) Severe hailstorms
(C) A "break" in the monsoon resulting in dry spells
(D) Formation of local tornadoes

permanent cold desert region.
(B) Arabian Sea branch moisture permanently changing its direction away from India.
(C) Delayed onset, dry spells, and extreme weather events.
(D) A uniform increase in annual rainfall across all existing 52 districts.

106. Which of the following districts of Madhya Pradesh is least likely to experience severe heat wave conditions during the month of May?
(A) Gwalior
(B) Anuppur
(C) Khajuraho (Chhatarpur)
(D) Datia

107. The occurrence of fog in Madhya Pradesh during January is predominantly seen near which geographical features?
(A) River valleys and large reservoirs
(B) High mountain peaks above 2000 meters
(C) Deep urban concrete jungles
(D) Barren rocky plateaus

108. Which of the following correctly describes the humidity trend across Madhya Pradesh from summer to monsoon?
(A) Drastic increase from dry summer to humid monsoon
(B) Drastic decrease from summer to monsoon
(C) Remains constant throughout both seasons
(D) Slight decrease due to high wind speeds

109. Consider the following statements about the climate of the Narmada Valley:
I. It lies parallel to the Tropic of Cancer, leading to intense heat during summer.
II. The valley topography prevents severe cold winds from entering, making winters relatively mild.
III. It receives rainfall primarily from the Arabian Sea branch.
IV. It is the driest region in Madhya Pradesh.
V. Evaporation rates are relatively high during the pre-monsoon season.
Which of the above statement(s) is/are incorrect?
(A) I and II only
(B) IV only
(C) III and V only
(D) II, IV, and V only

110. During the winter season, wind direction over Madhya Pradesh is largely influenced by the presence of a high-pressure system located over:
(A) The Bay of Bengal
(B) The Arabian Sea
(C) The northwestern plains of India
(D) The Indian Ocean (equatorial region)

111. A study on urban heat islands in Madhya Pradesh shows that nighttime temperatures in central Bhopal are significantly higher than in its rural outskirts. This is an example of which climatic effect?
(A) Macro-climate variation
(B) Orographic heating
(C) Continental temperature inversion
(D) Micro-climate modification due to urbanization

112. Evaporation rates in Madhya Pradesh show significant regional variation. Which combination of season and region registers the highest potential evapotranspiration?
(A) Winter season in the Malwa plateau
(B) Summer season in the Gird (Northern) region
(C) Monsoon season in the Satpura range
(D) Post-monsoon season in the Narmada valley

113. The second-highest rainfall-receiving area in Madhya Pradesh, characterized by dense Sal forests and the origin of major rivers, is:
(A) Bhedaghat
(B) Mandu
(C) Amarkantak
(D) Chanderi

114. The coefficient of variation for rainfall is highest in which part of Madhya Pradesh, indicating the lowest reliability of monsoon rains?
(A) South-east
(B) North-west
(C) Central
(D) East

115. Which of the following is an odd one out based on the common characteristic of experiencing frequent winter frosts?
(A) Morena
(B) Gwalior
(C) Shivpuri

Downloaded from www.pdf.tube

ANSWERS

1. (D) It results in lower temperatures and higher rainfall.
The high altitude of the Satpura-Maikal range leads to an orographic effect, causing air to rise and cool, resulting in higher precipitation. Its elevation naturally lowers average temperatures compared to surrounding lowlands. This combination creates a distinct highland climate within the state, supporting dense forests and diverse ecosystems due to consistent moisture and cooler conditions throughout the year.

2. (C) October Heat
During October, the retreating monsoon leads to clear skies and high solar radiation. Simultaneously, the soil remains moist from previous rains, increasing atmospheric humidity. This combination of high temperature and high humidity creates oppressive weather conditions locally known as October Heat. It marks the shift from the rainy season toward the cooler winter months across the plains of Central India.

3. (C) Significant distance from the sea
Madhya Pradesh is a landlocked state located in the heart of India. The northern plains are particularly distant from the moderating influences of the Arabian Sea and the Bay of Bengal. This geographic isolation results in a continental climate characterized by extreme temperature variations, with very hot summers and very cold winters consistently observed across these northern plains.

4. (C) P-1, Q-2, R-3, S-4
Pachmarhi experiences very high rainfall, often exceeding 190 cm, due to its windward hilly position. Bhind is in the arid northern region, receiving less than 60 cm. Balaghat, in the eastern high-rainfall zone, records approximately 140 to 160 cm. Indore, situated on the Malwa Plateau, typically receives around 75 to 100 cm of annual precipitation each monsoon season.

5. (B) May
The month of May represents the peak of the summer season in Madhya Pradesh. During this time, the sun moves towards the Tropic of Cancer, leading to intense solar radiation across the state. Daytime temperatures frequently exceed 40 degrees Celsius in most districts, particularly in the northern plains and the Bundelkhand region, occurring just before the monsoon arrival phase.

6. (B) Its elevation above mean sea level
The Malwa Plateau is situated at a higher elevation than the surrounding northern plains. This increased altitude leads to lower air pressure and faster cooling of the land surface after sunset. Consequently, while daytime temperatures may be high, the nights remain comparatively cool and pleasant, contributing to the plateau's reputation for having a moderate and equable regional climate.

7. (B) Tropical Monsoon climate
Madhya Pradesh's climate is primarily determined by its tropical location and the seasonal reversal of winds. The state receives the vast majority of its annual rainfall from the southwest monsoon winds between June and September. This pattern, combined with high temperatures and distinct seasonal changes, fits the classification of a tropical monsoon climate typical of the central Indian region.

8. (B) Mid-June
The Southwest Monsoon usually arrives in the southeastern parts of Madhya Pradesh around June 15th. It then gradually progresses across the state, reaching the western and northern districts by the end of June. This onset marks the end of the intense summer heat and the beginning of the primary agricultural season, providing essential water for the Kharif crops.

9. (B) Local convectional atmospheric instability
During late summer, intense heating of the land surface causes air to rise rapidly, creating localized low-pressure zones. This upward movement leads to the formation of thunderclouds through convection. These resulting pre-monsoon showers, often accompanied by lightning and strong winds, provide temporary relief from the

NODIA

scorching heat before the actual arrival of the moisture-laden southwest monsoon winds in June.

10. (C) Unala
In the regional dialect of Madhya Pradesh, the various seasons are identified by traditional names. The summer season, characterized by high temperatures and dry winds, is called Unala. Other terms include Siyala for the winter season and Chaumasa for the rainy season. These local nomenclatures are widely used by rural and farming communities to track their annual agricultural cycles.

11. (A) Both A and R are true and R is the correct explanation of A.
In March, the transition from winter to summer causes a rapid increase in daytime solar radiation. Clear skies and low humidity allow for significant terrestrial radiation at night, leading to a sharp drop in temperatures. This contrast between peak daytime heat and nighttime cooling results in the highest diurnal temperature range of the year across the central Indian plains.

12. (C) Aw (Tropical Savanna)
According to the Koppen climate classification, the southern regions of Madhya Pradesh, including the Narmada Valley, are categorized under the Aw type. This signifies a tropical savanna climate with a distinct dry season, usually in winter. The region experiences high temperatures throughout the year and receives concentrated rainfall during the summer monsoon months, supporting typical savanna-like vegetation patterns.

13. (C) Mid-September
The withdrawal of the Southwest Monsoon from Madhya Pradesh typically commences in the third week of September. It begins in the northwestern districts and moves toward the southeast. By early October, the monsoon system usually exits the state completely, leading to a temporary rise in temperature known as October Heat before the final transition into the cooler winter season.

14. (C) Cloudless skies, low humidity, and pleasant days
The winter season in Madhya Pradesh is generally characterized by clear, blue skies and very low humidity levels. The weather remains pleasant during the day with mild temperatures, while nights can become quite cold, especially in the northern districts. This stable atmospheric condition is occasionally interrupted by western disturbances, which may bring light rain or overcast skies for short periods.

15. (D) Most equable summer temperature - Gwalior
Gwalior is located in the northern part of Madhya Pradesh and experiences a continental climate with extreme summer heat. It is not known for equable temperatures. Conversely, the Malwa Plateau is recognized for its moderate and relatively equable climate. Other facts, such as Ganjbasoda recording high temperatures and Shivpuri recording low temperatures, accurately represent the extreme climate variations found.

16. (A) Tropic of Cancer
The Tropic of Cancer passes through fourteen districts in the middle of Madhya Pradesh. Its presence ensures that the sun's rays are nearly vertical during the summer solstice, leading to intense solar heating across the region. This geographical factor is a primary reason for the high summer temperatures and the overall tropical nature of the climate observed in the state.

17. (A) Softening the soil for early Kharif preparation.
Pre-monsoon showers, occurring in late May or early June, play a crucial role in agriculture. They provide the necessary moisture to soften the parched summer soil, allowing farmers to begin plowing and field preparation for the Kharif sowing season. This early moisture helps in the timely sowing of major crops like soybean and cotton as the main monsoon arrives.

18. (A) Aravalli range blocks all Arabian Sea branch moisture.
The Aravalli Range is oriented parallel to the direction of the southwest monsoon winds, which means it does not act as an effective barrier to block moisture. Instead, the winds pass by the range without being forced to rise, contributing to the aridity of Rajasthan. In contrast, the Satpura and Vindhyan ranges in Madhya Pradesh do influence rainfall patterns significantly.

Click Here to Buy book on Amazon

19. (D) Balaghat, Jabalpur, Bhopal, Gwalior
The Southwest Monsoon enters Madhya Pradesh from the southeast and progresses toward the northwest. Consequently, Balaghat in the southeast receives the monsoon first, followed by Jabalpur in the east-central region. Bhopal, located in the center, receives it later, and Gwalior, in the far north, is among the last regions to experience the onset of the annual rainy season.

20. (B) II and III only
The northern part of Madhya Pradesh experiences a continental climate, resulting in greater annual temperature ranges compared to the south. The Tropic of Cancer's position heavily influences summer heating, acting as a temperature divide. However, western parts like the Malwa Plateau often experience cooler nights than the east, making the first statement regarding eastern summer temperatures generally inaccurate for comparison.

21. (C) Northern and north-western districts.
Northern and north-western districts of Madhya Pradesh are more susceptible to severe cold during winter due to their proximity to the Himalayan region. These areas are frequently affected by cold, dry winds blowing from the north after the passage of western disturbances. This continental effect leads to significant temperature drops and occasional frost conditions in districts like Shivpuri and Gwalior.

22. (B) Cwg
The northern plains of Madhya Pradesh are classified as Cwg under the Koppen system. This code represents a humid subtropical climate characterized by a dry winter and a hot summer. The "w" indicates that the dry season occurs during the winter months, while the "g" stands for the Ganges type of temperature distribution where the peak heat occurs before the monsoon.

23. (D) March to Mid-June
The summer season in Madhya Pradesh starts in March as the sun moves northwards. Temperatures rise steadily through April and reach their peak in May and early June. This period is marked by dry weather and hot winds. The season typically concludes with the onset of the southwest monsoon, which brings rain and relief from the heat by mid-June.

NODIA

24. (D) Northern districts like Morena and Bhind.
Northern districts like Morena and Bhind are located far from primary sources of moisture and are characterized by an arid, continental climate. While convectional activity can occur, these areas typically experience intense dry heat and dust storms during the pre-monsoon period rather than significant rainfall. Convectional showers are more frequent in the southern and eastern forested highlands of the state.

25. (B) 100 to 120 days
The Southwest Monsoon typically lasts from mid-June to late September or early October in Madhya Pradesh. This duration of roughly 100 to 120 days accounts for the majority of the state's annual precipitation. The length of the rainy season varies slightly across the state, being longer in the eastern parts and shorter in the northwestern districts near the desert.

26. (D) Extreme heat in summer and extreme cold in winter
A continental climate, observed in northern Madhya Pradesh, is defined by large seasonal temperature variations. Due to the lack of moderating maritime influence, land surfaces heat up rapidly in summer and cool down quickly in winter. This results in scorching summer temperatures, often exceeding 45 degrees Celsius, and very cold winter nights where temperatures can drop close to the freezing point.

27. (A) Bundelkhand Plateau
The Bundelkhand Plateau is characterized by rocky terrain, sparse vegetation, and a lack of large water bodies. These factors contribute to rapid surface heating under the summer sun. Consequently, the region consistently records some of the highest daytime temperatures in Madhya Pradesh. Places like Khajuraho and Nowgong are well-known for experiencing intense heat waves during the months of May and June.

28. (A) P-3, Q-4, R-2, S-1
In Madhya Pradesh, the summer season is locally known as Unala. The winter season is called Siyala, and the rainy season is referred to as Chaumasa. Additionally, the light rainfall that occurs during the winter months, often due to western disturbances, is specifically

is crucial for the government to initiate relief measures and agricultural planning in Madhya Pradesh.

85. (C) Channeling the Arabian Sea branch moisture into the state.
The east-west orientation of the Narmada Rift Valley acts as a natural corridor for the Southwest Monsoon. It allows the moisture-laden winds from the Arabian Sea to penetrate deep into the heart of Madhya Pradesh. This channeling effect ensures that regions along and around the valley receive substantial rainfall, supporting rich agriculture and dense forest cover in central India.

86. (B) Micro-irrigation and groundwater resources
In the arid northern districts, high summer temperatures lead to extreme evaporation rates, depleting surface water and soil moisture. To sustain agriculture, farmers must use water-efficient micro-irrigation techniques like drip or sprinkler systems. They also rely heavily on pumping groundwater to ensure that crops receive adequate hydration during the critical growing periods when natural rainfall is insufficient or highly variable.

87. (A) Both Statement I and Statement II are correct.
Southern districts of Madhya Pradesh, being closer to the equator and further from the cold Himalayan winds, experience milder winters. The continental effect, which causes extreme cooling, is much stronger in the north. Consequently, while northern districts may face frost and sub-five-degree temperatures, the southern regions maintain more moderate and pleasant weather conditions during the peak winter months of December and January.

88. (B) Mandla, Hoshangabad, Ujjain, Bhind
Mandla, in the eastern high-rainfall zone, receives the most rain among the listed districts. Hoshangabad in the central Narmada Valley follows with significant precipitation. Ujjain, located on the Malwa Plateau, receives moderate rainfall. Bhind, in the far north, records the lowest amount, completing the descending order from the humid east and center to the semi-arid northern plains of the state.

89. (B) Droughts
The Bundelkhand region is historically prone to frequent and severe droughts. This is due to several factors, including its rocky topography, which prevents groundwater recharge, high rainfall variability, and its position away from major moisture tracks. The resulting water scarcity often leads to agricultural failure and economic distress, making drought management a top priority for the state government in this region.

90. (A) Gram (Chickpea)
Gram, a major pulse crop grown during the rabi season in northern Madhya Pradesh, is extremely sensitive to frost. When temperatures drop to near-freezing, the water in the plant's delicate tissues freezes, causing cell rupture and plant death. This vulnerability makes gram farming a high-risk activity during severe cold waves, often requiring protective measures like evening irrigation or creating smoke screens.

91. (B) Insolation on waterlogged soil raising temperature and humidity.
"October Heat" occurs when the monsoon starts retreating and the skies clear up. The intense sun heats the ground, which is still saturated with moisture from preceding rains. This leads to high evaporation and high humidity. The combination of high temperature and moisture in the air creates sultry and uncomfortable weather, which is a characteristic transition phase in Madhya Pradesh.

92. (C) Gird (Northern) Plains
The northern plains of the Gird region experience the longest and most intense summer in Madhya Pradesh. Due to its continental location and distance from the sea, the land heats up rapidly starting in March and remains very hot until the late arrival of the monsoon in late June or early July. This extended period of high heat and dry winds defines the regional climate.

93. (C) The passage of western disturbances followed by cold winds from the north
The sharp temperature drop in December and January is caused by the arrival of western disturbances. After these systems pass over northern India, they are followed by an inflow of cold, dry winds from the Himalayas. These

Downloaded from www.pdf.tube

higher rainfall due to the influence of the Bay of Bengal branch and hilly topography.

38. (D) 200 cm
Pachmarhi, located in the Mahadeo Hills of the Satpura range, is the highest rainfall station in Madhya Pradesh. Its unique topography acts as a barrier to the moisture-laden monsoon winds, forcing them to rise and precipitate. The average annual rainfall here is approximately 200 cm, making it a lush, green hill station with a distinct micro-climate compared to the plains.

39. (D) Loo
During the peak summer months of May and June, northern and central India experience a hot, dry, and dusty wind known as the Loo. In Madhya Pradesh, these winds significantly increase the daytime temperature and can cause heatstroke. They are a characteristic feature of the continental climate in the northern plains and the Bundelkhand and Malwa regions of the state.

40. (D) Umaria
Umaria is located in the eastern part of Madhya Pradesh, which generally receives more reliable and higher annual rainfall from the Bay of Bengal branch. On the other hand, Jhabua, Barwani, and Alirajpur are in the western part of the state. These western districts face high rainfall variability and are more susceptible to frequent droughts and moisture stress during the monsoon.

41. (A) I, II, and IV only
Deforestation reduces evapotranspiration, leading to lower atmospheric humidity and altered local rainfall. Removing forest cover also increases surface albedo and localized heating while exacerbating soil erosion and runoff during rains. However, reduced root absorption typically leads to a decrease in the water table due to faster runoff and lower infiltration, making the third statement regarding a rise incorrect.

42. (A) Both Statement I and Statement II are correct.
The eastern part of Madhya Pradesh, including districts like Balaghat and Mandla, consistently receives over 120 cm of rain due to its proximity to the Bay of Bengal branch. Conversely, the western regions near the Rajasthan border, such as Jhabua and Neemuch, often record less than 75 cm. This east-to-west rainfall gradient is a fundamental characteristic of the state's geography.

43. (B) 55 cm
Gohad in the Bhind district is officially recorded as the place with the lowest average annual rainfall in Madhya Pradesh. The region receives approximately 55 cm of rain. This aridity is due to its inland position in the northern plains, where monsoon winds have lost most of their moisture by the time they arrive, and the lack of mountain barriers.

NODIA

44. (D) Rabi crops like Wheat and Gram
Mawtha refers to the winter rainfall caused by western disturbances in Madhya Pradesh. This rain occurs during the growth phase of rabi crops such as wheat, gram, and mustard. The timely moisture from these showers is highly beneficial for the maturation and yield of these crops, often reducing the need for additional artificial irrigation during the dry winter months.

45. (C) Fog and frost
Temperature inversion occurs on calm, clear winter nights when the air near the ground cools faster than the air above. In the valleys of Madhya Pradesh, this trapped cold air leads to the condensation of moisture, resulting in thick fog. If temperatures drop below freezing near the surface, frost forms, which can be damaging to sensitive agricultural crops like pulses.

46. (B) The orographic effect of the Maikal and Vindhyan ranges
The eastern regions of Madhya Pradesh are dominated by the Maikal and Vindhyan hill ranges. These highlands intercept the moisture-laden winds coming from the Bay of Bengal. As the air is forced to rise over these ranges, it cools and condenses, leading to significant orographic rainfall. This geographical feature makes the eastern part of the state much wetter than the west.

47. (B) Max temp $\geq$40°C with departure of 4.5°C to 6.4°C.
According to the Indian Meteorological Department (IMD), a heat wave is declared in the plains when the maximum temperature reaches

Monsoon, not the retreating monsoon. Its mild temperatures are due to its elevation and balanced geographic position rather than the influence of retreating winter winds.

103. (B) High unreliability and variability of rainfall
Mixed farming, which involves growing multiple crops simultaneously, is a risk-mitigation strategy used by farmers in the Bundelkhand region. Since the rainfall here is highly unpredictable and variable, planting a variety of crops with different water requirements ensures that even if one crop fails due to a dry spell, another might survive, providing basic food security and economic stability.

104. (D) Southern parts of Nimar (Khargone/ Khandwa)
The southern parts of the Nimar region, including districts like Khargone and Khandwa, lie on the leeward side of the Satpura mountain range. As the monsoon winds from the south cross the Satpura peaks, they lose moisture on the windward side. When they descend into the Nimar plains, they are relatively dry, creating a localized rain shadow effect that results in lower rainfall.

105. (C) Delayed onset, dry spells, and extreme weather events.
Climate change in Madhya Pradesh is primarily observed through shifts in the monsoon pattern rather than a change in the climate type itself. This includes the monsoon arriving later than usual, more frequent and longer dry spells during the rainy season, and an increase in extreme events like sudden cloudbursts and intense heat waves, all of which disrupt traditional agricultural schedules.

106. (B) Anuppur
Anuppur is located in the eastern highland region of Madhya Pradesh, which has significant forest cover and higher elevation. These factors help in keeping temperatures relatively lower compared to the northern plains. Districts like Gwalior and Datia are part of the semi-arid Gird region, which is much more susceptible to extreme heat waves and higher maximum temperatures during the summer.

107. (A) River valleys and large reservoirs
Fog forms when moist air cools rapidly, a process favored by the presence of water bodies. In Madhya Pradesh, districts along the Narmada, Chambal, and Betwa rivers, as well as areas near large dams and reservoirs, experience frequent fog in January. Moisture from these water bodies, combined with nighttime temperature inversion common in valleys, leads to high concentrations of winter fog.

108. (A) Drastic increase from dry summer to humid monsoon
Madhya Pradesh experiences a sharp contrast in atmospheric moisture between seasons. Summer months are characterized by extremely dry air and very low relative humidity, often below 20%. With the arrival of the Southwest Monsoon in June, moisture-laden winds from the seas cause relative humidity to soar, frequently exceeding 80% during July and August, marking a drastic seasonal shift in the state's weather.

109. (B) IV only
The Narmada Valley is not the driest region in Madhya Pradesh; that distinction belongs to the northern plains near Bhind. The valley does lie near the Tropic of Cancer, leading to high summer heat, and its topography keeps winters mild. It also receives significant rain from the Arabian Sea branch and has high evaporation rates, making the fourth statement about it incorrect.

110. (C) The northwestern plains of India
During winter, a high-pressure system develops over the northwestern plains of India and the adjoining Himalayan region. This system drives the movement of cold, dry winds from the northwest toward the southeast across central India. In Madhya Pradesh, these northerly winds are the primary reason for the drop in temperature and the cold wave conditions experienced during December and January.

111. (D) Micro-climate modification due to urbanization
The observation that urban centers are warmer than their rural surroundings is a classic example of micro-climate modification. This is caused by human activities and the replacement of natural landscapes with heat-absorbing materials like

Click Here to Buy book on Amazon

57. (A) Agriculture (pulse and vegetable crops).
Severe cold waves and frost pose a direct threat to the agricultural sector in northern Madhya Pradesh. Pulse crops like gram and various winter vegetables are highly sensitive to freezing temperatures. Frost causes the water within plant cells to freeze and expand, leading to tissue damage and significant yield losses, which can have a major economic impact on local farmers.

58. (A) I and II only
Rainfall variability is indeed highest in the northern and western districts, where the monsoon is less reliable. This high variability is closely linked to a higher frequency of droughts. Conversely, the south-eastern districts experience more consistent and higher rainfall, meaning their coefficient of variation is actually lower than that of the semi-arid northwestern regions of the state.

59. (C) South-westerly
During the summer season, the development of a low-pressure zone over the Indian subcontinent draws in winds from the high-pressure areas over the southern Indian Ocean. In Madhya Pradesh, this results in a predominant south-westerly wind direction. These winds eventually strengthen into the Southwest Monsoon, bringing the much-needed rainy season to the region by the middle of June.

60. (B) High volume Narmada discharge from heavy rainfall.
Hoshangabad, now known as Narmadapuram, is situated on the banks of the Narmada River. During the monsoon, heavy rainfall in the river's large catchment area in eastern and central Madhya Pradesh leads to a massive increase in water discharge. When the river overflows its banks, it causes frequent flooding in the low-lying plains of the Narmada Valley.

61. (C) Indore
The primary climatic observatory of Madhya Pradesh is located in Indore. It holds historical significance as it was established during the British era by the Parsi community. This station has been continuously recording meteorological data for over a century, providing long-term insights into the climatic patterns and changes observed in the Malwa region and the state as a whole.

62. (A) The difference between the highest and lowest temperatures recorded in a single day.
The diurnal range of temperature is a meteorological metric that measures the variation between the maximum daytime temperature and the minimum nighttime temperature within a 24-hour period. In Madhya Pradesh, this range is typically largest during the dry pre-monsoon and winter months, when clear skies allow for rapid solar heating during the day and cooling at night.

63. (A) Cotton
The Nimar plains, comprising districts like Khargone and Khandwa, have an agro-climatic profile characterized by moderate rainfall and fertile black soil. These conditions are exceptionally well-suited for cotton cultivation. The region is often referred to as the "white gold" belt of Madhya Pradesh, as it is a leading producer of high-quality cotton in the state.

64. (A) I, II, and IV only
The Satpura-Maikal region is a major watershed with high rainfall and dense moist deciduous forests, home to Pachmarhi and Amarkantak. However, while it is warm, it does not typically experience the most extreme heat waves of 48 degrees Celsius, which are more characteristic of the northern plains. The highlands generally maintain cooler temperatures than the low-lying northern districts.

65. (A) Central India Plateau (Madhya Bharat Pathar)
The Central India Plateau, also known as Madhya Bharat Pathar, is located in the northernmost part of the state. Due to its higher latitude and distance from the sea, it experiences a sub-tropical climate with extreme seasonal variations. This region is characterized by very hot summers and very cold winters, distinguishing it from the more tropical savanna climate of the south.

66. (A) It causes Madhya Pradesh to have a highly variable and extreme climate.
Being a landlocked state, Madhya Pradesh lacks the moderating influence of the ocean, which keeps temperatures stable in coastal areas. Consequently, the state experiences a continental climate with high annual and diurnal temperature

Downloaded from www.pdf.tube

variations. This means summers are significantly hotter and winters are colder than in coastal states, leading to more extreme weather patterns throughout the year.

67. (C) 11
To facilitate better agricultural planning and resource management, Madhya Pradesh has been categorized into 11 distinct agro-climatic zones. These zones are defined based on various factors such as soil type, rainfall patterns, temperature, and topography. This classification helps in recommending specific crops and farming techniques tailored to the unique environmental conditions of each region within the state.

68. (B) Creating artificial smoke covers over fields at night.
Farmers in Madhya Pradesh traditionally use "smoking" or smudging to protect their crops from frost. By burning agricultural waste or wood near the fields on cold nights, they create a blanket of smoke. This smoke layer helps trap the Earth's outgoing long-wave radiation, keeping the temperature near the ground slightly higher and preventing the formation of damaging frost on the plants.

69. (A) Mahakoshal receives more rain due to orographic effects.
The Mahakoshal region in eastern Madhya Pradesh is characterized by hilly terrain that forces moisture-laden monsoon winds to rise, leading to high orographic rainfall. In contrast, the Gird region in the north is a plain area far from moisture sources. This lack of topographic barriers and moisture results in significantly lower rainfall in the north compared to the eastern highlands.

70. (C) 75 cm isohyet
The 75 cm isohyet is a significant climatic boundary in Madhya Pradesh. It roughly runs from north to south, dividing the state into two major rainfall zones. The region to the east of this line generally receives higher rainfall, supporting rice cultivation, while the region to the west receives lower rainfall and is more suited for crops like wheat and soybean.

71. (A) Shivpuri
Shivpuri, located on the northern plateau, has historically recorded the lowest temperatures in Madhya Pradesh. Its geographic position and elevation make it particularly vulnerable to cold air masses moving down from the Himalayas. In extreme winter seasons, temperatures here have been known to drop below zero, making it one of the coldest spots in the state during peak winter months.

72. (B) August
Relative humidity in Madhya Pradesh reaches its peak during the month of August. This is the middle of the southwest monsoon season, when the atmosphere is saturated with moisture from continuous rain-bearing winds. The frequent rainfall and overcast conditions ensure that humidity remains high across the state, contrasting sharply with the dry conditions experienced during the summer and winter months.

NODIA

73. (D) It brings the maximum amount of rainfall to the western districts.
The withdrawal of the monsoon is characterized by a decrease in rainfall, not an increase. While it involves the southward shifting of the monsoon trough and causes sultry "October Heat," it marks the end of the rainy season. The western districts actually receive their maximum rainfall during the peak monsoon months of July and August, rather than during the withdrawal phase.

74. (C) Rain-shadow location and moisture exhaustion of winds.
Droughts in western districts like Jhabua and Dhar are primarily due to their geographical position. These areas lie in the partial rain shadow of the Western Ghats for the Arabian Sea branch and are far from the Bay of Bengal branch. By the time monsoon winds reach these inland western regions, most of their moisture has already been precipitated elsewhere.

75. (D) Marathwada Plains
Marathwada is a geographical region located in the state of Maharashtra, not Madhya Pradesh. The agro-climatic zones of Madhya Pradesh include the Chhattisgarh Northern Hills, the Vindhya Plateau, the Malwa Plateau, and others like the Gird region and the Narmada Valley.

Each of these zones is distinct based on the soil and climatic characteristics found within the borders of Madhya Pradesh.

76. (D) Malwa Plateau
The Malwa Plateau is the most prominent region for soybean cultivation in India. Its climate, which features moderate and well-distributed monsoon rainfall, combined with moisture-retentive deep black cotton soil, provides the ideal environment for this crop. The plateau's drainage and temperature profiles during the Kharif season ensure high productivity, making Madhya Pradesh a leading soybean-producing state in the country.

77. (D) Increased local thunderstorms and altered rainfall patterns.
The Urban Heat Island effect in cities like Bhopal and Indore leads to higher localized temperatures. This excess heat can trigger convectional activity, resulting in more frequent and intense local thunderstorms compared to surrounding rural areas. Furthermore, the thermal differences can alter the movement of air and clouds, leading to noticeable changes in local rainfall distribution patterns within urban environments.

78. (D) Rainfall generally decreases from east to west and from south to north.
Rainfall in Madhya Pradesh follows a distinct spatial gradient. The eastern and southern parts receive higher precipitation because they are closer to the Bay of Bengal and have hilly topography. As the monsoon winds move toward the west and north, they lose moisture, leading to a general decrease in rainfall. This pattern significantly influences vegetation and agricultural practices across the state.

79. (B) Cloud cover and humidity moderate the diurnal variations.
During the monsoon season, persistent cloud cover acts as a blanket, reflecting solar radiation during the day and trapping terrestrial radiation at night. Additionally, high atmospheric humidity prevents rapid temperature changes. These factors work together to keep daytime temperatures relatively low and nighttime temperatures relatively high, resulting in the smallest difference between the daily maximum and minimum temperatures of the year.

80. (D) P-3, Q-4, R-1, S-2
The Kymore Plateau is known for rice and wheat. The Malwa Plateau is the hub for soybean and wheat. The Nimar Valley, with its black soil, is perfectly suited for cotton and sorghum. The Gird Region in the north, characterized by its alluvial soil and lower rainfall, is a major producer of wheat and sugarcane, among other crops.

81. (C) Divides the state into cooler northern and warmer southern halves.
In January, the 21 degree Celsius isotherm is used as a climatic marker in Madhya Pradesh. It generally separates the northern part of the state, which experiences a colder winter with temperatures frequently staying below this average, from the southern part, which remains relatively warmer. This temperature gradient is essential for understanding the distribution of winter crops and cold-wave vulnerability.

82. (A) The Narmada Valley and northern river plains
Fog and mist are most common in the river valleys and plains of northern Madhya Pradesh during winter. The presence of water bodies provides the necessary moisture, while the flat terrain allows cold air to settle and stagnate at night. Under clear skies, rapid cooling leads to the condensation of moisture near the ground, creating thick fog that often disrupts morning visibility.

83. (D) Rain-bearing Arabian Sea branch winds moving northwards.
The Vindhyan Escarpments act as a significant physical barrier for the moisture-laden winds of the Arabian Sea branch. As these winds move northward from the Narmada Valley, they are forced to rise over the escarpments. This causes orographic lifting, cooling, and subsequent rainfall on the windward slopes, which helps distribute moisture to the central and northern parts of the state.

84. (C) 25%
The Indian Meteorological Department (IMD) defines a meteorological drought based on the deficiency of rainfall. If the actual seasonal rainfall in a specific area is less than 75% of its long-term average (representing a deficit of 25% or more), it is classified as a drought. This metric

Click Here to Buy book on Amazon

at least 40 degrees Celsius and the departure from the normal temperature is between 4.5 and 6.4 degrees Celsius. If the departure exceeds 6.4 degrees, it is classified as a severe heat wave, which is common in northern Madhya Pradesh.

48. (B) Central and Eastern Vindhya-Satpura ranges.
The Arabian Sea branch and the Bay of Bengal branch of the Southwest Monsoon typically converge over the central and eastern parts of Madhya Pradesh. This meeting point, particularly around the Vindhya and Satpura mountain ranges, often results in heavy and sustained rainfall. The interaction of these two moisture sources contributes significantly to the high precipitation recorded in these highland regions.

49. (A) P-2, Q-1, R-4, S-3
Pachmarhi is known for the highest rainfall in the state. Bhind records the lowest rainfall. The Gwalior region, having a continental climate, experiences a high diurnal temperature range. The Malwa Plateau is celebrated for its equable climate, featuring moderate temperatures during both summer and winter, which is highly favorable for human settlement and varied agricultural activities in the region.

50. (C) 1, 2, 4, 3
Hoshangabad (Narmadapuram) is highly vulnerable to floods due to the Narmada River's discharge. Mandla also faces frequent flooding in the upper Narmada basin. Bhind, while in a low rainfall zone, is susceptible to floods from the Chambal and its tributaries. Indore, being on a plateau, generally has lower flood vulnerability compared to districts situated directly in major river valleys.

51. (D) Widespread establishment of urban forestry projects
Urban Heat Islands are caused by concrete structures, lack of vegetation, and industrial emissions that trap heat in cities. Urban forestry and green spaces actually mitigate this effect by providing shade and cooling through evapotranspiration. Therefore, the establishment of forestry projects is a solution to reduce the UHI effect rather than a factor that contributes to the rise in urban temperatures.

52. (D) The Bay of Bengal branch
While both branches of the Southwest Monsoon affect Madhya Pradesh, the Bay of Bengal branch is the primary source of moisture for the majority of the state. It travels across the eastern plains and hits the hilly regions of the state, resulting in higher rainfall totals, particularly in the eastern and central districts, compared to the Arabian Sea branch.

53. (C) Western disturbances
Winter rainfall in Madhya Pradesh, locally known as Mawtha, is caused by western disturbances originating from the Mediterranean region. These low-pressure systems travel across the Middle East and Pakistan before reaching India. They bring moisture and light showers to the northern and north-western parts of the state during the months of December, January, and February, benefiting the winter crops.

54. (C) Gwalior, Datia, and Bhind
The northern districts of Madhya Pradesh, such as Gwalior, Datia, and Bhind, are most severely affected by the Loo. These hot, dry winds blow from the deserts of Rajasthan and the northwestern plains during the peak summer months. Due to the lack of natural barriers and low humidity, these districts experience intense heat waves and temperatures that frequently exceed 45 degrees Celsius.

55. (A) Windward location on the Mahadeo hills.
Pachmarhi's position on the windward side of the Mahadeo Hills in the Satpura range is the primary reason for its high rainfall. When the moisture-laden monsoon winds hit these hills, they are forced upward, leading to cooling and heavy precipitation. This orographic effect makes Pachmarhi the wettest place in the state, receiving much more rain than the surrounding plains.

56. (A) 112 cm
The average annual rainfall for Madhya Pradesh is approximately 112 cm. However, there is significant regional variation across the state. The eastern districts often receive over 140 cm, while the western and northern districts may receive as little as 60 to 75 cm. This average reflects the state's transition from a humid subtropical climate to a semi-arid one in the northwest.

NODIA

northerly winds sweep across the plains of Madhya Pradesh, leading to cold wave conditions, nighttime frost, and a significant decrease in average daily temperatures.

94. (C) Dependable rainfall and moisture-retaining black soils.
The shift to commercial crops like soybean in the Malwa region has been supported by the area's favorable environmental factors. The plateau receives reliable monsoon rainfall and possesses deep black soil, which has excellent water-holding capacity. This ensures that crops have access to moisture even during short dry spells, providing the stability needed for large-scale commercial farming compared to more drought-prone areas.

95. (B) Lowering local daytime temperatures and increasing precipitation.
The dense forests of the Satpura and Maikal ranges significantly influence the local microclimate. Through the process of transpiration, trees release moisture into the atmosphere, which can enhance local cloud formation and rainfall. Additionally, the forest canopy provides shade and absorbs solar radiation, keeping daytime temperatures in these highlands significantly lower and more pleasant than in the cleared surrounding plains.

96. (B) 4, 1, 2, 3
The Nimar Valley and the Gird Region are among the drier parts of the state. The Malwa Plateau receives moderate rainfall. The Chhattisgarh Plains, specifically the area around Balaghat, record the highest rainfall in this group due to their eastern location. Thus, the sequence from the drier west and north to the humid southeast represents the correct increasing rainfall order for these zones.

97. (D) Bay of Bengal branch rains.
The Baghelkhand plateau in eastern Madhya Pradesh is geographically positioned to receive the majority of its rainfall from the Bay of Bengal branch of the Southwest Monsoon. As this branch moves inland across the eastern plains of India, it hits the highlands of Baghelkhand first, delivering substantial precipitation that is vital for the region's rainfed agriculture and rice cultivation.

98. (A) 2% to 5%
While winter rainfall (Mawtha) is crucial for rabi crops, it constitutes a very small fraction of total annual precipitation in Madhya Pradesh, typically between 2% and 5%. The vast majority of the state's rain, over 90%, is received during the four months of the Southwest Monsoon. Despite its low volume, Mawtha is highly valued for its timing during the dry winter.

99. (B) Automated Weather Stations
AWS stands for Automated Weather Stations. These are modernized meteorological systems used by the Indian Meteorological Department to collect real-time data on temperature, humidity, rainfall, wind speed, and direction. A network of these stations across Madhya Pradesh allows for more accurate local weather forecasting, agricultural monitoring, and disaster management by providing continuous and precise environmental information from various districts.

100. (C) A dry spell of several days during the monsoon season.
A "Monsoon Break" refers to a temporary pause in rainfall during the monsoon season that lasts for one or more weeks. In Madhya Pradesh, this happens when the monsoon trough shifts its position, often toward the Himalayan foothills. During such breaks, temperatures rise and humidity remains high, which can cause moisture stress for crops if the dry spell is prolonged.

101. (A) Both A and R are true and R is the correct explanation of A.
Jhabua is located in the extreme western part of Madhya Pradesh. It faces frequent droughts because it lies at the tail end of both the Arabian Sea and Bay of Bengal monsoon branches. By the time the wind systems reach this area, most of their moisture has been depleted over other regions. This geographic disadvantage, combined with high rainfall variability, leads to recurring water scarcity.

102. (C) A is true but R is false.
The Malwa Plateau is historically praised for its pleasant and moderate climate, often described as having "the best climate." However, the reason provided is incorrect. The plateau receives the majority of its rainfall from the Southwest

Downloaded from www.pdf.tube

termed Mawtha. These terms are integral to the traditional understanding of the regional climate and agricultural cycles.

29. (C) It brings clear skies, decreasing humidity, and a gradual drop in night temperatures.
The retreating monsoon season in Madhya Pradesh, occurring during October and November, is marked by the withdrawal of rain-bearing clouds. As the monsoon trough moves south, humidity levels decrease and the sky becomes clear. While daytime temperatures remain relatively high initially, the nights gradually become cooler, signaling the transition into the winter season with stable and dry atmospheric conditions.

30. (D) Northern districts (Gird region)
The northern districts of Madhya Pradesh, part of the Gird region, are most exposed to cold waves from northern India. These areas lack natural barriers against frigid winds originating from the Himalayas. As a result, districts such as Shivpuri, Gwalior, and Datia frequently record the state's lowest minimum temperatures, sometimes dropping below 2 degrees Celsius during peak winter months.

31. (C) Nimar and Malwa regions
The Arabian Sea branch of the Southwest Monsoon enters Madhya Pradesh from the west and southwest. It primarily provides rainfall to the Nimar and Malwa regions as it moves inland. While it eventually merges with the Bay of Bengal branch in the central part of the state, its initial impact is strongest in these western and southwestern districts.

32. (B) Monsoon winds are exhausted of moisture by arrival.
Gwalior and Bhind are located in the northernmost part of Madhya Pradesh, far from both the Arabian Sea and the Bay of Bengal. By the time monsoon winds reach these inland regions, they have already traveled long distances and released most of their moisture. This exhaustion of moisture, combined with the lack of orographic barriers, results in very low rainfall.

33. (B) Monsoon winds lose moisture by the time they reach these regions.
The northern and western regions of Madhya Pradesh are situated deep within the Indian landmass. As the monsoon branches travel from the coasts, they discharge their moisture over the southern and eastern parts of the state first. Consequently, the winds reaching the northwest are significantly drier, leading to lower average annual rainfall compared to the rest of the state.

34. (D) Inflow of cold, dry winds from the snow-clad Himalayan region
Cold waves in Madhya Pradesh are typically caused by the southward movement of cold, dry air masses from the Himalayas. This usually occurs after the passage of a western disturbance over northern India. These winds bring a sharp drop in temperature across the state, particularly affecting the northern plains where there is little topographic resistance to the cold air inflow.

NODIA

35. (A) Mediterranean Sea
Western disturbances are extra-tropical storms that originate over the Mediterranean Sea. They travel eastward across West Asia and enter the Indian subcontinent through the northwest. These systems are responsible for bringing winter rainfall and snow to northern India. In Madhya Pradesh, they cause the localized winter rain known as Mawtha, which is vital for the rabi crops.

36. (A) Short intense rainfall spells with long dry spells.
Recent climate trends in Madhya Pradesh show a significant shift in the distribution of rainfall. Although the total annual precipitation may remain similar, it often occurs in fewer, more intense bursts. This pattern of short, heavy spells followed by prolonged dry periods increases the risk of both flash floods and agricultural droughts, complicating traditional water management and farming practices.

37. (A) Neemuch
Neemuch is located in the northwestern part of Madhya Pradesh, which is characterized by a semi-arid climate and lower annual rainfall. In contrast, districts like Mandla, Dindori, and Anuppur are situated in the eastern part of the state. This eastern region receives significantly

concrete and asphalt. This phenomenon, known as the Urban Heat Island effect, alters the temperature profile of a city independently of the broader regional climatic patterns of the state.

112. (B) Summer season in the Gird (Northern) region
Potential evapotranspiration is highest when temperatures are extreme and humidity is low. The Gird region of Madhya Pradesh experiences these conditions during the summer months of May and June. The combination of intense solar radiation, high temperatures (often above 45 degrees Celsius), and dry winds causes water to evaporate rapidly from soil and plants, leading to significant moisture loss in this zone.

113. (C) Amarkantak
Amarkantak, located in the Maikal Hills where the Vindhya and Satpura ranges meet, is the second-highest rainfall-receiving area in Madhya Pradesh after Pachmarhi. It is famous for its dense Sal forests and as the source of the Narmada, Son, and Johila rivers. Its high elevation and forested landscape create a unique, cool, and moist climate that supports rich biodiversity and major river systems.

114. (B) North-west
The coefficient of variation measures the reliability of rainfall. In Madhya Pradesh, this value is highest in the north-western districts like Neemuch, Sheopur, and Jhabua. A high coefficient means that rainfall amounts vary significantly from year to year, making the region more prone to unpredictable weather and frequent agricultural droughts compared to the more stable eastern and southern districts of the state.

115. (D) Barwani
Barwani is located in the southwestern part of Madhya Pradesh, which has a warmer climate and is less prone to extreme cold waves and frost. In contrast, Morena, Gwalior, and Shivpuri are all in the northern Gird region. These northern districts are much more likely to experience sub-zero temperatures and damaging winter frosts due to their direct exposure to Himalayan winds.

116. (D) Ganjbasoda (Vidisha)
The highest temperature ever officially recorded in Madhya Pradesh was 48.7 degrees Celsius at Ganjbasoda in the Vidisha district in 1995. This reflects the intense continental heating that central India can experience during the peak summer. Such extremes are typically caused by clear skies, dry soil, and the presence of the Tropic of Cancer, which brings the sun directly overhead in June.

117. (D) Moisture from both branches aided by orographic lift.
Eastern Madhya Pradesh receives more rainfall because it is closer to the Bay of Bengal branch and its hilly terrain provides the necessary orographic lift to condense moisture. Furthermore, it occasionally benefits from the Arabian Sea branch moisture as well. The western part is drier because it is further from moisture sources and lacks similar topographic barriers to trigger heavy regional precipitation.

118. (D) P-1, Q-4, R-3, S-2
The Northern Plains have a sub-tropical climate with extreme temperatures. The Vindhyan Hilly Region experiences moderate summers and cool winters. The Narmada Valley is known for hot summers and normal winters. The Malwa Plateau is uniquely characterized by its equable climate, featuring moderate extremes that make it one of the most comfortable residential and agricultural regions in the state of Madhya Pradesh.

119. (A) High-intensity, short-duration localized cloudbursts.
Although western Madhya Pradesh is generally a low-rainfall area, it is susceptible to flash floods caused by cloudbursts. These are sudden, very heavy downpours that occur in a small area over a short period. Because the soil in these semi-arid regions is often dry and hard, it cannot absorb water quickly enough, leading to rapid surface runoff and sudden flooding in river valleys.

120. (A) Rise in temperatures and reduction in soil moisture retention.
Large-scale deforestation in the Narmada basin has direct climatic consequences. The loss of tree cover reduces the cooling effect of evapotranspiration, leading to an increase in local daytime temperatures. Additionally, without tree roots to hold the soil and facilitate water infiltration, the land's ability to retain moisture

Click Here to Buy book on Amazon

decreases, making the region more vulnerable to both drying and soil erosion during monsoons.

121. (A) Watershed management and drought-resistant seed varieties.
To combat the challenges of variable rainfall and high evaporation in western Madhya Pradesh, long-term strategies focus on water conservation and adaptation. Watershed management helps in harvesting rainwater and recharging groundwater. Simultaneously, using drought-resistant seed varieties ensures that crops can survive periods of moisture stress, making the agricultural system more resilient to semi-arid conditions and the impacts of climate change.

122. (D) Suited for water-efficient crops like Mustard and Sorghum.
The Gird region in northern Madhya Pradesh has an alluvial soil base but receives relatively low rainfall. Consequently, it is best suited for crops that do not require excessive water. Mustard, rapeseed, and sorghum are major crops here because they can thrive in semi-arid conditions and utilize the available soil moisture efficiently. This makes the region a primary hub for oilseed production.

123. (C) A "break" in the monsoon resulting in dry spells
The monsoon trough is a low-pressure zone that determines where rainfall occurs. When this trough shifts north toward the Himalayas, the rainfall activity moves away from Central India. This leads to a "monsoon break" in Madhya Pradesh, characterized by clear skies, rising temperatures, and a lack of rain for several days, which can be detrimental to standing Kharif crops.

124. (B) Gird Region (Northern Madhya Pradesh)
The Gird region, encompassing northern districts like Gwalior and Bhind, is where the state's temperature extremes overlap. Due to its continental location, it records some of the highest summer temperatures in India and some of the lowest winter temperatures in the state. This high annual temperature range is a defining feature of the northern plains, where neither maritime nor mountain influences moderate seasonal weather.

125. (A) P-4, Q-3, R-1, S-2
Northern Plains are very hot, often exceeding 42-45°C. The Malwa Plateau is more moderate, ranging between 38-42°C. The Pachmarhi Hills remain cool even in summer, staying between 30-35°C. The Narmada Valley experiences high heat but is generally slightly less extreme than the far north, with temperatures between 40-45°C, making this the correct match for the temperatures of these regions.

126. (A) The Vindhyan Range
The Vindhyan Range acts as the primary climatic and geographical divide in Madhya Pradesh. It separates the northern plains, which have a sub-tropical continental climate, from the Deccan plateau regions to the south, which have a more tropical savanna climate. By influencing wind patterns and moisture distribution, the range creates distinct environmental zones that affect everything from temperature to agricultural practices.

NODIA

127. (B) I, II, IV, and V
The retreating monsoon in October and November marks the transition to winter. While it brings clear skies and a drop in night temperatures, it does not bring more rainfall than the Southwest Monsoon, which accounts for the bulk of the year's rain. The initial phase is indeed sultry due to humidity and high daytime heat, which is the "October Heat" phenomenon.

128. (D) Temperature inversion
Temperature inversion is a common winter phenomenon in the river valleys of Madhya Pradesh. Under clear skies and calm winds, the land loses heat rapidly, cooling the air in direct contact with it. This creates a layer of cold air trapped beneath a layer of warmer air. This inversion prevents the upward movement of air and often leads to thick fog and frost.

129. (B) Aandhi
In Madhya Pradesh, the intense thunderstorms that occur during the pre-monsoon period are often referred to as Aandhi. These storms are characterized by strong, gusty winds and are frequently accompanied by significant dust, especially in the northern and western parts of the state. They represent the atmospheric instability caused by summer heating and provide localized,

short-lived rainfall before the main monsoon onset.

130. (A) Wheat cultivation in the west and Rice cultivation in the east

The 75 cm isohyet is a major agricultural boundary in Madhya Pradesh. The eastern side of this line receives enough rainfall to support water-intensive rice cultivation. To the west of this line, where rainfall is lower and black cotton soil predominates, the conditions are better suited for wheat and soybean. This climatic divide fundamentally shapes the state's food production and regional farming.

www.nodia.in

NODIA

CHAPTER 12
Soils and Mineral Resources

1. What differentiates the black soil found in the Malwa plateau from that found in the Narmada valley?
(A) Malwa has deep black soil, while the Narmada valley has shallow black soil.
(B) Malwa black soil is highly acidic, whereas Narmada black soil is highly alkaline.
(C) Malwa black soil lacks iron, whereas Narmada black soil lacks calcium.
(D) Malwa has medium black soil, while the Narmada valley has deep black soil.

2. Mixed red and black soil is typically distributed in which of the following regions of Madhya Pradesh?
(A) Malwa Plateau
(B) Nimar Plains
(C) Bundelkhand Region
(D) Satpura-Maikal Ridge

3. What is the standard basis for the broad classification of soils in Madhya Pradesh by the State Agriculture Department?
(A) Exclusively based on the altitude of the terrain
(B) Based solely on the percentage of nitrogen content
(C) Based on color, texture, and regional availability
(D) Exclusively based on the proximity to major river basins

4. Consider the following statements regarding Alluvial Soil in Madhya Pradesh:
I. It is locally known as 'Domat' or 'Kachhari' soil.
II. It is highly prone to gully erosion in the Chambal region.
III. It covers more than 40 percent of the total geographical area of the state.
IV. It is considered slightly alkaline in nature.
Which of the above statement(s) is/are INCORRECT?
(A) I and II
(B) III only
(C) II and IV
(D) I and IV

5. Red and Yellow soils are predominantly found in which of the following districts of Madhya Pradesh?
(A) Dhar, Jhabua, and Alirajpur
(B) Mandla, Balaghat, and Shahdol
(C) Gwalior, Datia, and Shivpuri
(D) Khandwa, Khargone, and Barwani

6. Which district in Madhya Pradesh is most severely affected by ravine and gully erosion?
(A) Bhopal
(B) Morena
(C) Jabalpur
(D) Seoni

7. Which of the following best defines the parent material responsible for the formation of black soil in the Malwa plateau of Madhya Pradesh?
(A) Sedimentary rocks of the Vindhyan system
(B) Basaltic rocks of the Deccan Trap
(C) Granitic rocks of the Bundelkhand region
(D) Metamorphic rocks of the Gondwana sequence

8. Laterite soil in Madhya Pradesh is traditionally considered most suitable for which of the following agricultural activities?
(A) Commercial cultivation of wheat and seasonal gram
(B) Plantation crops and millets
(C) Intensive farming of paddy in waterlogged conditions
(D) Large-scale cultivation of commercial sugarcane crops

9. Which of the following soil types in Madhya Pradesh suffers the most from a deficiency of both nitrogen and phosphorus?
(A) Deep and shallow Black Soils

Downloaded from www.pdf.tube

(B) Most soil types in the state
(C) Alluvial Soil in northern plains
(D) Red and Yellow Soil in the east

10. Consider the following statements regarding Red and Yellow soils in Madhya Pradesh:
I. They cover the second-largest soil area in the state after black soil.
II. They are naturally rich in humus and nitrogen.
Which of the above statement(s) is/are correct?
(A) I only
(B) II only
(C) Both I and II
(D) Neither I nor II

11. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Examine these two statements carefully and select the correct answer.
Assertion (A): The Chambal valley region of Madhya Pradesh has vast tracts of badland topography.
Reason (R): The region consists of deep alluvial deposits that are highly susceptible to vertical scouring by water flow.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

12. The deep black soil in Madhya Pradesh is primarily concentrated in which of the following geographical regions?
(A) Baghelkhand Plateau
(B) Bundelkhand Plateau
(C) Narmada River Valley
(D) Gwalior and Chambal Plains

13. Which of the following elements is generally found in adequate to rich quantities in the alluvial soils of northern Madhya Pradesh?
(A) Potash
(B) Nitrogen
(C) Phosphorus
(D) Humus

14. Which process is primarily responsible for the formation of Laterite soils in Madhya Pradesh?
(A) Continuous deposition of silt by perennial river systems
(B) Mechanical wind erosion of sandstone parent rock beds
(C) Intense leaching during alternating seasons
(D) Rapid cooling of lava following major volcanic activity

15. Identify the incorrect statement concerning soil erosion in Madhya Pradesh.
(A) The Chambal river is the primary agent of ravine formation in northern MP.
(B) Sheet erosion heavily impacts the fertile topsoil of the Malwa plateau during heavy monsoons.
(C) Unscientific agricultural practices contribute to accelerated soil erosion in the state.
(D) Wind erosion is a severe problem in the dense forest regions of eastern Madhya Pradesh.

16. Which primary climatic factor has predominantly influenced the weathering processes leading to the diverse soil classifications in Madhya Pradesh?
(A) Sub-tropical monsoon climate
(B) Equatorial continuous tropical rainfall pattern
(C) Mediterranean winter rainfall and dry summers
(D) Arid desert climate with high diurnal variation

17. What is the local term often used in Madhya Pradesh to refer to the highly infertile and stony lateritic soils?
(A) Bhata
(B) Regur
(C) Khadar
(D) Domat

18. In which of the following districts of Madhya Pradesh is shallow black soil predominantly found?
(A) Betul and Chhindwara
(B) Hoshangabad and Narsinghpur
(C) Ujjain and Indore
(D) Bhind and Morena

NODIA

(D) Jharkhand

63. Why is the cultivation of pulses highly successful in the central regions of Madhya Pradesh?
(A) Seasonal moisture retention
(B) Permanently waterlogged soil conditions
(C) High levels of inherent soil nitrogen
(D) High acidity levels in the soil beds

64. Consider the following statements regarding copper mining in Madhya Pradesh:
I. Madhya Pradesh is the largest producer of copper ore in India.
II. The Malanjkhand copper project is operated by Hindustan Copper Limited.
III. Copper deposits in MP are completely devoid of any associated gold or silver traces.
Which of the above statement(s) is/are INCORRECT?
(A) I and II only
(B) III only
(C) II and III only
(D) I, II, and III

65. Which coalfield in Madhya Pradesh is famous for having one of the thickest coal seams in Asia?
(A) Singrauli
(B) Sohagpur
(C) Mohpani
(D) Shahpur

66. Dolomite is a structural variant of limestone that contains a significant percentage of which element?
(A) Magnesium
(B) Iron
(C) Aluminum
(D) Lead

67. Which of the following soil types covers the largest percentage of the total geographical area of Madhya Pradesh?
(A) Red and Yellow Soil
(B) Alluvial Soil
(C) Black Soil
(D) Laterite Soil

68. Limestone is abundantly found in Madhya Pradesh primarily due to the extensive presence of which rock system?
(A) Gondwana
(B) Vindhyan
(C) Deccan Trap
(D) Cuddapah

69. Which famous mine in the Balaghat district is known for producing high-grade Manganese ore?
(A) Bharveli
(B) Malanjkhand
(C) Majhgawan
(D) Agargaon

70. Coal deposits in Madhya Pradesh primarily belong to which geological rock system?
(A) Dharwar System
(B) Vindhyan System
(C) Gondwana System
(D) Tertiary System

71. Match the minerals in List I with their major industrial uses in List II:
List I: (Mineral)
P. Rock Phosphate
Q. Limestone
R. Fireclay
S. Bauxite
List II: (Major Industrial Use)
1. Cement Manufacturing
2. Fertilizer Industry
3. Aluminum Extraction
4. Refractory Bricks
(A) P-2, Q-1, R-4, S-3
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-3, R-1, S-2
(D) P-2, Q-4, R-1, S-3

72. The term 'Bangar' in the context of the northern plains of Madhya Pradesh relates to:
(A) Newly formed black soils
(B) Old alluvial soil terraces
(C) Eroded laterite crust layers
(D) Red soils with granite pebbles

73. Which variety of iron ore is predominantly found in the Jabalpur and Mandla districts of Madhya Pradesh?
(A) Magnetite
(B) Limonite
(C) Siderite
(D) Hematite

Click Here to Buy book on Amazon

(D) P-2, Q-4, R-3, S-1

29. What is the general pH nature of the black soil found across the Malwa plateau?
(A) Highly acidic soil conditions
(B) Strongly alkaline soil properties
(C) Slightly to moderately alkaline
(D) Strictly neutral chemical state

30. Which of the following is a characteristic feature of Laterite soil found in the Balaghat and Chhindwara districts?
(A) Abundant in nitrogen, potassium, and phosphorus content
(B) High pH value characterized by strong alkaline properties
(C) Superior water retention capacity compared to black soil
(D) Rich in iron and aluminum oxides

31. Which state government initiative focuses on compensating for the loss of green cover and controlling soil erosion simultaneously?
(A) Narmada Seva Mission works
(B) Krishak Udyami Yojana schemes
(C) Massive afforestation drives
(D) Bhavantar Bhugtan Yojana plans

32. The concept of 'integrated watershed management' in Madhya Pradesh encompasses which of the following?
(A) Construction of large reservoirs
(B) Comprehensive resource management
(C) Diverting land for industrial use
(D) Focus on deep borewell drilling

33. Which specific soil conservation measure is extensively promoted in the undulating topography of the Malwa plateau to reduce surface runoff?
(A) Creation of massive concrete sea-walls
(B) Contour bunding and terracing
(C) Complete substitution of agriculture with pastoralism
(D) Sand dune stabilization grids

34. What is the most appropriate method to prevent wind erosion in the western districts of Madhya Pradesh during summer?
(A) Deep continuous plowing
(B) Leaving the soil bare
(C) Flooding with groundwater
(D) Shelterbelts and windbreaks

35. In the context of soil fertility in Madhya Pradesh, what does the application of gypsum primarily address?
(A) To reclaim alkaline soils
(B) To neutralize acidic soils
(C) To increase sand content
(D) To eradicate soil fungi

NODIA

36. Identify the correct pair from the following regional soil distributions in Madhya Pradesh:
(A) Narmada Valley - Deep Black Soil
(B) Malwa Plateau - Red and Yellow Soil
(C) Bundelkhand - Deep Black Soil
(D) Baghelkhand - Alluvial Soil

37. Which of the following is NOT a prominent cause of soil erosion in the Malwa region of Madhya Pradesh?
(A) Glacial movement
(B) Excessive overgrazing
(C) Large-scale deforestation
(D) Unscientific tillage

38. Which tree species is most frequently used for ravine reclamation projects in the Chambal basin due to its extensive root system?
(A) Teak (Tectona grandis)
(B) Sal (Shorea robusta)
(C) Sandalwood (Santalum album)
(D) Babool (Acacia nilotica)

39. What causes the characteristic red color of the soil found predominantly in the Baghelkhand region?
(A) Content of organic carbon
(B) Potassium permanganate levels
(C) Unweathered basaltic rocks
(D) Ferrous and ferric oxides

40. What does the term 'Badland topography' specifically refer to in the geography of Madhya Pradesh?
(A) Industrialized polluted zones
(B) Urban waste management areas
(C) Waterlogged saline soil sites
(D) Extensively eroded landform

41. In the context of Madhya Pradesh's soil geography, the 'Bhander' and 'Kaimur' ranges primarily influence the formation of which soil type in their immediate vicinity?
(A) Deep Black Soil
(B) Mixed Red and Black Soil
(C) Coastal Alluvial Soil
(D) Peaty and Marshy Soil

42. Match the erosion terms in List I with their descriptions in List II:
List I: (Term related to erosion)
P. Splash Erosion
Q. Sheet Erosion
R. Rill Erosion
S. Gully Erosion
List II: (Description)
1. Formation of deep, wide channels
2. Uniform removal of topsoil by water
3. Formation of small, shallow channels
4. Dislodging of soil particles by raindrops
(A) P-2, Q-4, R-1, S-3
(B) P-4, Q-3, R-2, S-1
(C) P-4, Q-2, R-3, S-1
(D) P-3, Q-1, R-4, S-2

43. Which among the following is a negative consequence of excessive canal irrigation in the black soil regions of Madhya Pradesh?
(A) Depletion of micronutrients
(B) Salinity and waterlogging
(C) Conversion to laterite soil
(D) Combustion of organic matter

44. Which of the following best describes the 'creeping' process of soil erosion?
(A) Wind lifting fine particles
(B) River cutting banks laterally
(C) Raindrops splashing particles
(D) Slow downhill soil movement

45. The term 'Khadar' refers to which specific variant of soil found in the northern fringes of Madhya Pradesh?
(A) Old limy alluvial soil
(B) Weathered laterite brick soil
(C) New flood-deposited soil
(D) Highly alkaline black soil

46. What is the primary ecological impact of the expansion of ravines in northern Madhya Pradesh?
(A) Systematic increase in groundwater levels
(B) Loss of fertile arable land
(C) Improvement in local ecological biodiversity
(D) Formation of natural freshwater lake systems

47. Which district of Madhya Pradesh is least likely to have deep black soil?
(A) Hoshangabad
(B) Sidhi
(C) Narsinghpur
(D) Harda

48. Find the odd one out among the following practices in the context of soil conservation in Madhya Pradesh.
(A) Strip cropping
(B) Shifting cultivation
(C) Mulching
(D) Crop rotation

49. Arrange the following stages of water erosion in the correct chronological order of their occurrence:
1. Gully erosion
2. Splash erosion
3. Rill erosion
4. Sheet erosion
(A) 2, 4, 3, 1
(B) 4, 2, 1, 3
(C) 2, 3, 4, 1
(D) 3, 1, 4, 2

50. Consider the following soil conservation methods:
I. Contour farming
II. Terracing
III. Overgrazing
IV. Afforestation
V. Construction of check dams
Which combination represents correct soil conservation methods applicable in Madhya Pradesh?
(A) I, II, IV, and V
(B) I, III, IV, and V
(C) II, III, and IV
(D) I, II, III, and V

Downloaded from www.pdf.tube

51. What is a primary limitation of cultivating crops in the Laterite soils of Madhya Pradesh?
(A) They have an extremely high water table causing constant waterlogging.
(B) They are too alkaline to support most staple food crops.
(C) They cannot be physically plowed due to extreme hardness year-round.
(D) They are highly porous and inherently poor in essential nutrients.

52. Which structural measure is most commonly adopted in the Chambal ravines for soil conservation and land reclamation?
(A) Deep plowing on steep slopes
(B) Use of chemical fertilizers
(C) Setting up wide windbreaks
(D) Construction of check dams

53. Which of the following is considered a primary vegetative measure to control soil erosion in the sloping lands of the Satpura region?
(A) Continuous tuber cropping
(B) Building masonry walls
(C) Planting cover crops
(D) Frequent deep tilling

54. Which of the following statements about the Alluvial soil of Madhya Pradesh is correct?
(A) Formed by Deccan trap weathering
(B) Constitutes 50% of soil cover
(C) Replenished by river floods
(D) Deficient in calcium and potash

55. How does the practice of 'crop rotation' benefit the mixed red and black soils of the Bundelkhand region?
(A) Maintaining nutrient balance
(B) Altering the soil texture to clay
(C) Decreasing water holding capacity
(D) Making the soil highly acidic

56. The Rajiv Gandhi Watershed Management Mission in Madhya Pradesh primarily aims to achieve which of the following?
(A) Soil and water conservation
(B) Privatization of water resources
(C) Construction of large-scale dams
(D) Eradication of illegal mining

57. Which nutrient deficiency is remarkably widespread across almost all agricultural soils of Madhya Pradesh, requiring continuous supplementation?
(A) Zinc
(B) Iron
(C) Copper
(D) Manganese

58. Select the correct sequence of soil layers (horizons) from the surface downwards in a typical mature soil profile of the Narmada valley.
(A) Subsoil → Topsoil → Parent Rock → Weathered Rock
(B) Topsoil → Subsoil → Weathered Rock → Parent Rock
(C) Weathered Rock → Subsoil → Topsoil → Parent Rock
(D) Parent Rock → Weathered Rock → Subsoil → Topsoil

NODIA

59. Which soil type in Madhya Pradesh is generally considered to have the highest natural agricultural potential without heavy irrigation?
(A) Shallow black soil
(B) Laterite soil
(C) Deep black soil
(D) Mixed red and black soil

60. What is the impact of heavy mechanized farming on the deep black soils of Madhya Pradesh during wet conditions?
(A) Improvement in soil aeration
(B) Soil structure destruction
(C) Increase in nitrogen content
(D) Formation of natural humus

61. The Majhgawan mine in Madhya Pradesh is famous worldwide for the extraction of which mineral?
(A) Gold
(B) Uranium
(C) Diamond
(D) Manganese

62. After the bifurcation of the state in 2000, most of the high-grade iron ore reserves originally in Madhya Pradesh went to which state?
(A) Chhattisgarh
(B) Maharashtra
(C) Uttar Pradesh

19. Which crop is most extensively cultivated in the mixed soil regions of Madhya Pradesh due to the soil's moderate fertility?
(A) Basmati Rice
(B) Soybean
(C) Black Pepper
(D) Jowar (Sorghum)

20. Consider the following statements regarding the soils of Madhya Pradesh:
I. Black soil is deficient in nitrogen, phosphate, and organic matter.
II. Alluvial soil is formed by the depositional activities of rivers like Chambal.
III. Laterite soil is highly suitable for the cultivation of cotton.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II, and III

21. Wind erosion in Madhya Pradesh is relatively more noticeable in which of the following regions?
(A) South-eastern districts bordering Chhattisgarh
(B) Southern districts bordering Maharashtra
(C) North-western districts bordering Rajasthan
(D) Central districts of the Narmada valley

22. Which of the following statements correctly describes the physical behavior of Regur soil during the dry season?
(A) It becomes highly powdery and prone to severe wind erosion.
(B) It develops deep cracks which help in self-ploughing and aeration.
(C) It turns into a hard, impermeable crust that prevents air circulation.
(D) It rapidly loses its darker hue and turns pale yellow.

23. What imparts the characteristic yellow color to the red-yellow soils found in the eastern parts of Madhya Pradesh?
(A) High concentration of magnesium
(B) Presence of calcium carbonate
(C) Abundance of un-decomposed organic matter
(D) Hydration of ferric oxide

24. Identify the correct statement regarding the fertility of soils in Madhya Pradesh.
(A) The fertility of black soil is primarily due to its high humus content.
(B) Laterite soil requires minimum fertilizer application for high crop yields.
(C) Mixed soil has uniform fertility throughout the Bundelkhand region.
(D) Alluvial soil is considered the most fertile soil type in the state.

25. Alluvial soil in Madhya Pradesh is largely confined to which geographical area?
(A) South-western tribal districts
(B) The northern plains regions
(C) Central Narmada rift valley
(D) The eastern Maikal range

26. Which specific property of Black Cotton Soil (Regur) makes it highly suitable for dryland farming in Madhya Pradesh?
(A) Rapid water drainage through large pore spaces
(B) Abundant nitrogen content and organic matter level
(C) Acidic pH levels ideal for specific cash crops
(D) High moisture retention capacity

27. Which type of soil erosion is most predominantly responsible for the creation of the extensive ravines in the Chambal valley?
(A) Gully erosion
(B) Splash erosion
(C) Sheet erosion
(D) Wind erosion

28. Match the soil types in List I with their major regions or districts in Madhya Pradesh in List II:
List I: (Soil Type)
P. Alluvial Soil
Q. Red-Yellow Soil
R. Deep Black Soil
S. Mixed Soil
List II: (Major Region/District)
1. Narmada Valley
2. Baghelkhand
3. Bundelkhand
4. Chambal Region
(A) P-4, Q-2, R-1, S-3
(B) P-1, Q-3, R-4, S-2
(C) P-4, Q-3, R-1, S-2

Click Here to Buy book on Amazon

74. Which is the smallest coalfield in Madhya Pradesh based on geographical area?
(A) Singrauli Coalfield
(B) Korar Coalfield
(C) Umaria Coalfield
(D) Johila Coalfield

75. The bauxite reserves of the Amarkantak plateau in Madhya Pradesh supply raw material predominantly to which aluminum plant?
(A) NALCO (Odisha site)
(B) BALCO (Korba site)
(C) VEDANTA (Jharsuguda)
(D) HINDALCO (Renukoot)

76. Which natural phenomenon contributes significantly to the natural aeration of Regur soils in Madhya Pradesh?
(A) Seasonal dry earthworm activity
(B) Wind-borne coarse sand deposits
(C) Limestone dissolution processes
(D) Clay swelling and shrinking

77. Find the odd one out among the following minerals found in Madhya Pradesh based on their metallic or non-metallic nature.
(A) Copper ores
(B) Manganese
(C) Iron Ores
(D) Rock Phosphate

78. The diamond-bearing kimberlite pipes in Madhya Pradesh are primarily located in which district?
(A) Chhatarpur
(B) Satna
(C) Rewa
(D) Panna

79. The Malanjkhand mine in the Balaghat district is renowned as the largest open-cast mine in India for which mineral?
(A) Manganese
(B) Copper
(C) Bauxite
(D) Coal

80. Which of the following locations is an exception and does NOT have significant coal deposits in Madhya Pradesh?
(A) Betul
(B) Chhindwara
(C) Shahdol
(D) Khargone

81. In Madhya Pradesh, dolomite is extensively mined and heavily utilized as a flux in which major industry?
(A) Glass Manufacturing
(B) Paper Industry sector
(C) Iron and Steel
(D) Textile Industry units

82. Madhya Pradesh holds a monopoly in the production of which of the following minerals in India?
(A) Diamond
(B) Coal
(C) Iron Ore
(D) Copper

83. Which is the largest coalfield in Madhya Pradesh in terms of area and reserves?
(A) Umaria Coalfield
(B) Pench-Kanhan Coalfield
(C) Pathakhera Coalfield
(D) Sohagpur Coalfield

84. Madhya Pradesh is one of the leading producers of Manganese in India. The manganese ore in the state is primarily associated with which series of rocks?
(A) Sakoli Series
(B) Bijawar Series
(C) Sausar Series
(D) Kaimur Series

85. The abundance of limestone in the Katni and Satna districts has led to the heavy concentration of which industry in the region?
(A) Iron and Steel Industry
(B) Aluminum Smelting
(C) Cement Industry
(D) Fertilizer Industry

86. Which of the following practices is recognized as a biological method of soil conservation in the state?
(A) Retaining wall construction
(B) Mulching and cover crops
(C) Contour trench excavation
(D) Paving natural drain channels

Downloaded from www.pdf.tube

108. Bhedaghat in Jabalpur district is famous nationwide for the deposits of which specific building material?
(A) White Marble
(B) Red Sandstone
(C) Black Granite
(D) Yellow Slate

109. Agargaon in the Hoshangabad (Narmadapuram) district is historically famous for the deposit of which strategic mineral?
(A) Uranium
(B) Thorium
(C) Beryllium
(D) Tungsten

110. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Examine these two statements carefully and select the correct answer.
Assertion (A): Madhya Pradesh exports a significant portion of its mined bauxite to neighboring states rather than refining it completely within the state.
Reason (R): The state historically lacked large-scale aluminum smelting plants capable of refining all the extracted bauxite locally.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

111. Which of the following is a major constraint in the optimum utilization of mineral wealth in Madhya Pradesh?
(A) Lack of domestic industrial demand
(B) Ban on private sector participation
(C) Absence of detailed geological maps
(D) High extraction and transport costs

112. Fireclay deposits in Madhya Pradesh are typically found associated with which mineral deposits?
(A) Balaghat copper ores
(B) Gondwana coal seams
(C) Panna diamond pipes
(D) Mandla bauxite sites

113. Which district in Madhya Pradesh is known for the occurrence of Fluorite (Fluorspar) deposits?
(A) Ujjain
(B) Khandwa
(C) Neemuch
(D) Mandla

114. What is the most severe environmental impact associated with open-cast coal mining in the Singrauli region?
(A) Excessive topsoil salinization
(B) Deforestation and pollution
(C) Increased local seismic events
(D) Depletion of stratospheric ozone

115. Which mineral, widely found in the Jhabua and Alirajpur districts, is primarily used for mitigating soil acidity and in the cement industry?
(A) Gypsum
(B) Calcite
(C) Asbestos
(D) Dolomite

116. What is the most appropriate geological explanation for the formation of Bauxite deposits in the Maikal range of Madhya Pradesh?
(A) Subterranean volcanic activities
(B) Metamorphism of limestone beds
(C) Ancient glacial sediment deposits
(D) Extreme weathering and leaching

117. In which year did the Government of Madhya Pradesh announce its first comprehensive State Mineral Policy?
(A) 1985
(B) 2004
(C) 2010
(D) 1995

NODIA

118. Consider the following statements regarding mineral wealth in Madhya Pradesh:
I. The Bharveli mine is recognized as the deepest underground manganese mine in Asia.
II. Malanjkhand holds the largest known copper reserves in India.
III. Manganese ore in MP is strictly found in sedimentary rock formations.
IV. Copper extracted from MP is sent to Hindustan Copper Limited's smelter.

98. In addition to diamonds, the riverbeds of which river in Madhya Pradesh are occasionally known for panning of semi-precious stones and agates?
(A) Narmada
(B) Betwa
(C) Tons
(D) Ken

99. The issue of illegal sand mining in Madhya Pradesh has been most prominently associated with the basin of which river, leading to severe ecological concerns?
(A) Tapti
(B) Narmada
(C) Shipra
(D) Mahi

100. The historically significant red sandstone, used in the construction of the Sanchi Stupa and Gwalior Fort, belongs to which geological system?
(A) Dharwar
(B) Gondwana
(C) Vindhyan
(D) Deccan Trap

101. Consider the following statements regarding the Mineral Policy of Madhya Pradesh:
I. It emphasizes value addition of minerals within the state.
II. It promotes transparency through the e-auction of mineral blocks.
III. It strictly prohibits any foreign direct investment in the mining sector.
IV. It prioritizes environmental protection and mine reclamation.
V. It completely exempts small-scale miners from paying royalties.
Which of the above statement(s) is/are INCORRECT?
(A) I and II
(B) III and V
(C) II, III, and IV
(D) I, IV, and V

102. Select the correct sequence of the following major coalfields of Madhya Pradesh when arranged geographically from East to West:
(A) Singrauli → Sohagpur → Umaria → Pench-Kanhan
(B) Pench-Kanhan → Umaria → Sohagpur → Singrauli
(C) Sohagpur → Singrauli → Pench-Kanhan → Umaria
(D) Umaria → Pench-Kanhan → Singrauli → Sohagpur

103. Identify the correct statement regarding marble deposits in Madhya Pradesh.
(A) Madhya Pradesh produces only white marble and lacks any colored marble.
(B) Green marble is primarily extracted from the Alirajpur district.
(C) Marble is a sedimentary rock formed by the compression of sandstone.
(D) The state imports all its raw marble from Rajasthan.

104. Corundum, an extremely hard mineral naturally found in Madhya Pradesh, is a crystalline form of which chemical compound?
(A) Silicon dioxide
(B) Calcium carbonate
(C) Iron sulfide
(D) Aluminum oxide

105. The Madhya Pradesh State Mining Corporation (MPSMC) was established in which year to undertake scientific mining and trading of minerals?
(A) 1956
(B) 1975
(C) 1962
(D) 1991

106. Rock Phosphate extracted in Madhya Pradesh is primarily used for the manufacturing of which product?
(A) High-grade cement
(B) Superphosphate fertilizers
(C) Synthetic diamonds
(D) Electrical insulators

107. Which of the following is the primary document that outlines the strategic goals and regulatory measures for the mining sector in Madhya Pradesh?
(A) State Mineral Policy
(B) State Industrial Policy
(C) State Forest Policy
(D) State Land Revenue Code

Click Here to Buy book on Amazon

(A) Resource-rich with diverse minerals
(B) Rich in precious metals but no others
(C) Dependent on soil with zero minerals
(D) Largest inland oil and gas producer

www.nodia.in

NODIA

Which of the above statement(s) is/are correct?
(A) I, II, and IV
(B) II, III, and IV
(C) I and III only
(D) I, II, III, and IV

119. The mining sector is a core pillar of the state's economy. Royalties collected from mining operations form a significant part of the state's:
(A) Non-tax revenue
(B) Tax revenue
(C) Capital receipts
(D) Grants-in-aid

120. Which district in Madhya Pradesh is recognized for the occurrence of Corundum?
(A) Sidhi
(B) Dhar
(C) Guna
(D) Rajgarh

121. Which of the following technological tools is increasingly being used by the Madhya Pradesh Mining Department to curb illegal transportation of minerals?
(A) E-transit passes and GPS
(B) Highway-based seismographs
(C) Manual district toll booths
(D) Radar-based mining detection

122. Which factor primarily dictates the location of large-scale cement manufacturing units in the Satna and Rewa clusters?
(A) Proximity to major export ports
(B) High concentration of IT skills
(C) Cheap hydroelectric power sources
(D) Abundant limestone availability

123. Mine reclamation, a mandatory requirement under environmental laws in Madhya Pradesh, fundamentally involves:
(A) Expanding footprint into forest zones
(B) Selling abandoned sites to locals
(C) Restoring mined land to use
(D) Flooding pits with industrial waste

124. In the context of mineral-based industries, the town of Nepanagar in Madhya Pradesh requires which chemical input originally derived from mineral processing?
(A) Processed alumina powder
(B) Caustic soda and chlorine
(C) Concentrated sulfuric acid
(D) Solid calcium carbonate

125. Arrange the following states in descending order of their total value of mineral production (excluding atomic and fuel minerals):
1. Odisha
2. Madhya Pradesh
3. Rajasthan
(A) 1, 3, 2
(B) 1, 2, 3
(C) 2, 1, 3
(D) 3, 1, 2

126. Under the District Mineral Foundation (DMF) trust framework in Madhya Pradesh, the funds collected from miners are mandated to be utilized primarily for:
(A) Welfare of mining-affected areas
(B) Subsidizing equipment for companies
(C) Funding various political campaigns
(D) Expanding state office buildings

127. The extraction of 'Slate' in Madhya Pradesh is predominantly associated with which district, supporting a local pencil-making industry?
(A) Burhanpur
(B) Mandsaur
(C) Dindori
(D) Agar Malwa

128. The excessive and unscientific mining of river sand in Madhya Pradesh most directly contributes to which ecological disaster?
(A) Depletion of stratospheric ozone
(B) Formation of localized acid rain
(C) Increasing soil salinity levels
(D) Altering flow and habitat

129. What forms the basis for the calculation of royalty to be paid to the state government by mining leaseholders in Madhya Pradesh?
(A) Total number of employees at the mine
(B) Volume or value of extraction
(C) Total surface area of the lease
(D) Annual profit of the mining firm

130. Based on the geological formations and mineral occurrences, Madhya Pradesh can accurately be described as:

Downloaded from www.pdf.tube

is a major environmental concern in northern Madhya Pradesh.

28. (A) P-4, Q-2, R-1, S-3
Different soil types in Madhya Pradesh are linked to specific geographic regions. Alluvial soil is characteristic of the northern Chambal region, while red-yellow soil dominates the eastern Baghelkhand area. Deep black soil is found in the fertile Narmada valley, and mixed soil is typically distributed across the Bundelkhand plateau. Understanding these regional associations is essential for planning effective agricultural strategies.

29. (C) Slightly to moderately alkaline
The black soil of the Malwa plateau generally maintains a slightly to moderately alkaline pH level. This chemical property is influenced by the basaltic parent rock and the accumulation of lime in the soil profile. This alkaline nature is generally favorable for many crops, although careful management is required to prevent excessive salinity and ensure the availability of essential micronutrients for farming.

30. (D) Rich in iron and aluminum oxides
Laterite soil found in districts like Balaghat and Chhindwara is rich in iron and aluminum oxides due to intense leaching. This soil forms under conditions of high rainfall and temperature, which wash away silica and lime. The resulting soil is typically reddish, acidic, and relatively poor in organic matter, making it suitable for specific crops like tea, coffee, and hardy millets.

31. (C) Massive afforestation drives
Massive afforestation drives in Madhya Pradesh are designed to restore green cover while simultaneously controlling soil erosion. By planting trees, the state aims to stabilize the soil with root systems and reduce the impact of rainfall on the ground surface. These initiatives are crucial for protecting fertile land, reclaiming eroded areas like ravines, and enhancing the state's overall ecological health.

32. (B) Comprehensive resource management
Integrated watershed management in Madhya Pradesh involves a comprehensive approach to managing natural resources, including soil, water, and vegetation. The goal is to conserve water, prevent soil erosion, and improve agricultural productivity within a specific drainage area. This method prioritizes sustainable land use and community participation to ensure long-term environmental stability and economic benefits for the local rural population.

33. (B) Contour bunding and terracing
In the undulating topography of the Malwa plateau, contour bunding and terracing are extensively promoted to reduce surface runoff and prevent soil erosion. These physical structures slow down the flow of water across slopes, allowing more time for infiltration into the ground. By breaking the velocity of runoff, these measures help preserve the fertile topsoil and improve moisture levels for crops.

34. (D) Shelterbelts and windbreaks
To prevent wind erosion in the western districts of Madhya Pradesh, the establishment of shelterbelts and windbreaks is the most appropriate method. These consist of rows of trees or shrubs planted to break the wind's force near the ground. By reducing wind velocity, these vegetative barriers prevent the displacement of fine topsoil particles, protecting agricultural fields during the dry summer months.

35. (A) To reclaim alkaline soils
In Madhya Pradesh, the application of gypsum is a common agricultural practice used primarily to reclaim alkaline soils. Gypsum helps in displacing excess sodium from the soil particles, which improves soil structure and permeability. This treatment is essential for restoring the productivity of salt-affected lands, allowing for better water infiltration and creating a more suitable environment for the growth of various crops.

36. (A) Narmada Valley - Deep Black Soil
The Narmada Valley is correctly paired with deep black soil, which is a major geographical feature of central Madhya Pradesh. This soil is formed from the weathering of basaltic rocks and is known for its significant depth and fertility. In contrast, other regions like the Malwa plateau have medium black soil, while the eastern areas like Baghelkhand are dominated by red-yellow soils.

NODIA

ANSWERS

1. (D) Malwa has medium black soil, while the Narmada valley has deep black soil.
Black soil in Madhya Pradesh varies significantly by region. The Malwa plateau is primarily characterized by medium black soil, which is suitable for soybean and wheat. In contrast, the Narmada valley contains deep black soil deposits, which are much thicker and possess higher clay content, offering superior moisture retention for intensive agricultural production in that specific river basin region.

2. (C) Bundelkhand Region
Mixed red and black soil is a distinctive feature of the Bundelkhand region in northern Madhya Pradesh. This soil type results from the weathering of granitic and gneissic rocks combined with basaltic influences. It is moderately fertile and supports the cultivation of various crops like coarse grains, pulses, and oilseeds, depending on the localized nutrient availability and seasonal moisture.

3. (C) Based on color, texture, and regional availability
The State Agriculture Department of Madhya Pradesh classifies soils primarily based on their physical characteristics and geographic distribution. Key factors include color, such as red or black, and texture, ranging from sandy to clayey. This systematic approach helps in identifying regional soil availability and planning agricultural strategies tailored to the specific chemical and physical properties found across the state's landscape.

4. (B) III only
Alluvial soil, often referred to as 'Domat' or 'Kachhari' soil, is predominant in the northern plains of Madhya Pradesh. While it is highly fertile and slightly alkaline, it covers a relatively small portion of the state's total area rather than forty percent. It is particularly susceptible to gully erosion in the Chambal region, requiring specific conservation measures for protection.

5. (B) Mandla, Balaghat, and Shahdol
Red and yellow soils are typically found in the eastern parts of Madhya Pradesh, covering districts such as Mandla, Balaghat, and Shahdol. This soil type develops from the weathering of crystalline and metamorphic rocks under monsoon conditions. It is characterized by its red color due to ferric oxide and turns yellow when hydrated, supporting paddy cultivation in these areas.

6. (B) Morena
The Morena district is the most severely affected region regarding ravine and gully erosion in Madhya Pradesh. This environmental challenge is caused by the Chambal River's intensive vertical scouring of the soft alluvial deposits. Over time, this process has created extensive badland topography, rendering large tracts of land unsuitable for traditional agriculture and requiring significant state-level land reclamation efforts.

7. (B) Basaltic rocks of the Deccan Trap
The black soil found throughout the Malwa plateau is derived from the weathering and disintegration of basaltic rocks belonging to the Deccan Trap. These volcanic rocks are rich in minerals like iron and magnesium. The resulting soil, also known as Regur, is characterized by its fine texture, high clay content, and exceptional moisture retention capacity for intensive agricultural farming practices.

8. (B) Plantation crops and millets
Laterite soil in Madhya Pradesh is characterized by its porous nature and low nutrient content due to intensive leaching. This soil type is traditionally considered suitable for plantation crops and hardy millets. Because it lacks essential minerals like nitrogen and phosphorus, it requires careful management and fertilizer application to support high-value agricultural production effectively in districts like Balaghat and Chhindwara.

Click Here to Buy book on Amazon

9. (B) Most soil types in the state
Most soil types across Madhya Pradesh, including black, alluvial, and red-yellow soils, suffer from a natural deficiency in nitrogen and phosphorus. This widespread lack of essential nutrients necessitates the regular application of chemical fertilizers or organic manures to maintain soil fertility and ensure healthy crop yields. Understanding these deficiencies is crucial for effective state-level agricultural and soil management.

10. (A) I only
Red and yellow soils constitute the second-largest soil group in Madhya Pradesh, covering a significant portion of the eastern districts. These soils are primarily formed from ancient crystalline rocks. However, they are naturally deficient in humus, nitrogen, and phosphorus, which limits their inherent fertility. This lack of organic matter distinguishes them from more productive soil types like the black soil.

11. (A) Both A and R are true and R is the correct explanation of A.
The Chambal valley is famous for its extensive badland topography, characterized by deep ravines. This landscape forms because the region contains thick layers of alluvial deposits. During heavy rains, water flow causes intense vertical scouring, carving deep gullies into the soft soil. This process creates a rugged terrain that is largely unsuitable for cultivation without significant land reclamation projects.

12. (C) Narmada River Valley
Deep black soil in Madhya Pradesh is primarily concentrated within the Narmada River valley. This region features thick deposits of basaltic weathered material, which provides the soil with its characteristic depth and high clay content. The exceptional water-holding capacity of this soil makes it highly productive for agriculture, supporting major crops like wheat and pulses in the central districts.

13. (A) Potash
Alluvial soils in northern Madhya Pradesh are generally rich in potash, which is essential for plant growth and stress resistance. However, these soils typically lack adequate amounts of nitrogen, phosphorus, and organic humus. The high potash content is a result of the mineral composition of the sediments deposited by rivers like the Chambal, contributing to the fertility of the region.

14. (C) Intense leaching during alternating seasons
Laterite soils are formed through the process of intense leaching, which occurs in regions with high rainfall and alternating wet and dry seasons. This process washes away silica and lime, leaving behind soil rich in iron and aluminum oxides. In Madhya Pradesh, this typically occurs on high-altitude plateaus where heavy monsoon rains facilitate the removal of soluble soil components over time.

15. (D) Wind erosion is a severe problem in the dense forest regions of eastern Madhya Pradesh.
Soil erosion in Madhya Pradesh is primarily driven by water rather than wind. While the Chambal region faces severe gully erosion and the Malwa plateau deals with sheet erosion, wind erosion is not a major issue in the dense forest regions of the east. Forests naturally protect the soil with roots and leaf litter, significantly reducing erosion risks compared to open lands.

16. (A) Sub-tropical monsoon climate
The soil classifications in Madhya Pradesh are predominantly influenced by the sub-tropical monsoon climate. This climatic pattern, characterized by distinct wet and dry seasons, drives the weathering of parent rocks and the leaching of minerals. The resulting variations in temperature and precipitation levels across the state determine the physical and chemical properties of the soil, such as color and texture.

17. (A) Bhata
In Madhya Pradesh, the term 'Bhata' is locally used to describe the stony and relatively infertile lateritic soils. These soils are often characterized by a high content of pebbles and iron nodules, which reduces their capacity to hold water and nutrients. This term reflects the regional understanding of soil quality and its limitations for intensive agricultural activities in certain plateau areas.

18. (A) Betul and Chhindwara
Shallow black soil is predominantly found in the southern districts of Madhya Pradesh,

NODIA

including Betul and Chhindwara. This soil type is characterized by its thin layer over the parent basaltic rock. It typically has lower moisture retention compared to deep black soil and is often used for the cultivation of millets and oilseeds in the undulating terrain of these regions.

19. (D) Jowar (Sorghum)
Jowar is extensively cultivated in the mixed soil regions of Madhya Pradesh, such as Bundelkhand. This crop is well-suited to the soil's moderate fertility and its ability to withstand varying moisture levels. Because mixed soils often have inconsistent nutrient profiles, hardy crops like sorghum provide a reliable food source and income for farmers in these diverse and challenging geographical areas.

20. (A) I and II only
Black soil in Madhya Pradesh is naturally deficient in nitrogen, phosphorus, and organic matter, requiring supplementation for high yields. Alluvial soil is formed by the depositional activities of rivers like the Chambal in the northern plains. However, laterite soil is generally not suitable for cotton, as cotton thrives best in the moisture-retaining and nutrient-rich properties of black cotton soil.

21. (C) North-western districts bordering Rajasthan
Wind erosion in Madhya Pradesh is more noticeable in the north-western districts that border the arid state of Rajasthan. In these areas, sparse vegetation and lower rainfall levels make the soil more vulnerable to the abrasive action of strong winds, especially during the dry summer months. This process displaces the topsoil, impacting agricultural productivity and necessitating the use of shelterbelts.

22. (B) It develops deep cracks which help in self-ploughing and aeration.
Regur soil, or black soil, exhibits a unique physical behavior where it shrinks and develops deep cracks during the dry season. This process is beneficial as it allows for natural aeration and the falling of surface soil into the cracks, effectively resulting in 'self-ploughing'. When the rains arrive, the soil swells again, closing the cracks and trapping essential moisture for crops.

23. (D) Hydration of ferric oxide
The yellow color in the red-yellow soils found in eastern Madhya Pradesh is caused by the hydration of ferric oxide. While the red color is due to the presence of iron in its oxidized form, the addition of water to these minerals results in a yellow hue. This chemical transformation is common in regions with high seasonal rainfall and significant soil moisture.

24. (D) Alluvial soil is considered the most fertile soil type in the state.
Alluvial soil is recognized as the most fertile soil type in Madhya Pradesh due to its rich mineral content and fine texture. It is formed by the silt deposited by major rivers in the northern plains. This soil supports a wide variety of crops, including wheat and sugarcane, making it highly valuable for the state's agricultural economy compared to other types.

25. (B) The northern plains regions
Alluvial soil in Madhya Pradesh is largely confined to the northern plains, particularly within the Chambal and Gwalior regions. This area receives sediment deposits from the Chambal River and its tributaries, creating deep layers of fertile soil. The geographic focus on the northern fringe distinguishes this soil type from the basaltic black soils that dominate the central and western parts.

NQDIA

26. (D) High moisture retention capacity
Black Cotton Soil, or Regur, is exceptionally suited for dryland farming because of its high moisture retention capacity. The soil's high clay content allows it to hold significant amounts of water for long periods, which is vital for crops in regions with limited irrigation. This property ensures that plants can access moisture even during dry spells, supporting reliable agricultural production.

27. (A) Gully erosion
Gully erosion is the primary process responsible for the formation of extensive ravines in the Chambal valley. This occurs when runoff water creates deep channels or gullies in the soft alluvial soil. Over time, these gullies widen and deepen, resulting in a severely dissected landscape known as badland topography. This form of erosion

87. Bauxite is primarily processed to extract which crucial metal?
(A) Iron
(B) Aluminium
(C) Copper
(D) Zinc

88. Match the minerals in List I with their major producing districts in Madhya Pradesh in List II:
List I: (Mineral)
P. Copper
Q. Coal
R. Bauxite
S. Limestone
List II: (Major Producing District)
1. Singrauli
2. Balaghat
3. Katni
4. Anuppur (Amarkantak)
(A) P-1, Q-2, R-3, S-4
(B) P-2, Q-1, R-4, S-3
(C) P-4, Q-3, R-2, S-1
(D) P-2, Q-4, R-1, S-3

89. Besides Balaghat, which other district in Madhya Pradesh has significant occurrences of copper ore?
(A) Neemuch
(B) Betul
(C) Gwalior
(D) Bhind

90. The coalfields of Madhya Pradesh are broadly classified into which two major regions?
(A) Central India and Satpura Coalfields
(B) Malwa and Bundelkhand Coalfields
(C) Narmada and Tapti Coalfields
(D) Vindhyan and Chambal Coalfields

91. Granite quarrying is a significant economic activity in which of the following regions of Madhya Pradesh?
(A) Malwa Plateau
(B) Bundelkhand Plateau
(C) Narmada River Bed
(D) Chambal Ravines

92. Which of the following is considered a 'Strategic Mineral' found in Madhya Pradesh, crucial for national security and advanced technology?
(A) Industrial Limestone
(B) Refractory Fireclay
(C) Tungsten (Wolframite)
(D) Building-grade Slate

93. Pyrophyllite and Diaspore are often found occurring together in Madhya Pradesh. They are primarily used in which industry?
(A) Petrochemical industry
(B) Food processing units
(C) Ceramics and Refractory
(D) Aviation sector usage

94. Match the mines/locations in List I with their associated minerals in List II:
List I: (Mines/Locations)
P. Majhgawan
Q. Malanjkhand
R. Bharveli
S. Amarkantak
List II: (Associated Minerals)
1. Copper
2. Bauxite
3. Diamond
4. Manganese
(A) P-1, Q-3, R-2, S-4
(B) P-3, Q-4, R-1, S-2
(C) P-3, Q-1, R-4, S-2
(D) P-2, Q-1, R-4, S-3

95. Tin ore (Cassiterite) has been historically reported in minor quantities in which district of Madhya Pradesh?
(A) Rewa
(B) Betul
(C) Tikamgarh
(D) Jhabua

96. What is the primary role of the Geological Survey of India (GSI) concerning the mineral resources of Madhya Pradesh?
(A) International mineral sales
(B) Regional exploration and mapping
(C) Issuing private mining leases
(D) Collecting state-level royalty

97. Which district in Madhya Pradesh is the principal producer of Rock Phosphate?
(A) Panna
(B) Singrauli
(C) Datia
(D) Jhabua

Downloaded from www.pdf.tube

37. (A) Glacial movement
Glacial movement is not a cause of soil erosion in the Malwa region, as the state's climate is sub-tropical and lacks glaciers. Instead, erosion in Malwa is primarily caused by human activities such as large-scale deforestation, excessive overgrazing, and unscientific tillage practices. These factors remove protective vegetation and disturb the soil structure, making it highly vulnerable to sheet erosion during the monsoon.

38. (D) Babool (Acacia nilotica)
Babool is frequently used in ravine reclamation projects in the Chambal basin because of its extensive and deep root system. This hardy tree species can survive in harsh conditions and helps stabilize the loose alluvial soil, preventing further gully expansion. Its growth provides a biological barrier against erosion and contributes to the restoration of degraded lands in northern Madhya Pradesh.

39. (D) Ferrous and ferric oxides
The characteristic red color of the soil in the Baghelkhand region is primarily due to the presence of ferric oxides. These iron compounds occur naturally in the soil as a result of the weathering of ancient crystalline rocks. The intensity of the red hue often depends on the level of oxidation and the specific mineral composition found in the area.

40. (D) Extensively eroded landform
In Madhya Pradesh geography, 'Badland topography' refers to an extensively eroded landform characterized by deep ravines and gullies. This is most prominent in the Chambal valley, where water erosion has carved the landscape into a rugged, unusable terrain. These areas are difficult to traverse and cultivate, posing significant challenges for agricultural development and requiring specialized conservation and reclamation strategies.

41. (B) Mixed Red and Black Soil
The Bhander and Kaimur ranges influence the formation of mixed red and black soil in their vicinity. These geological formations consist of different rock types that weather to produce varying soil properties. The interaction between the older sedimentary rocks and more recent volcanic influences leads to a diverse soil profile, which is characteristic of the transition zones near these prominent mountain ranges.

42. (C) P-4, Q-2, R-3, S-1
Soil erosion occurs in several stages with distinct characteristics. Splash erosion involves the dislodging of soil by raindrops, while sheet erosion is the uniform removal of the topsoil layer. Rill erosion creates small, shallow channels, and gully erosion results in deep, wide channels. Understanding these terms is vital for identifying the severity of land degradation and implementing appropriate conservation measures.

NODIA

43. (B) Salinity and waterlogging
Excessive canal irrigation in the black soil regions of Madhya Pradesh can lead to salinity and waterlogging. Because black soil has high clay content and low permeability, over-irrigation causes the water table to rise, bringing salts to the surface. This degrades the soil quality and can render fertile land unproductive, highlighting the need for efficient water management and drainage systems in agriculture.

44. (D) Slow downhill soil movement
The 'creeping' process of soil erosion refers to the very slow, almost imperceptible downhill movement of soil particles due to gravity. This process is often influenced by alternating freezing and thawing or wetting and drying cycles. While slow, soil creep can lead to the gradual deformation of slopes and contribute to long-term landscape changes, particularly in the undulating terrains of central India.

45. (C) New flood-deposited soil
'Khadar' refers to the new, fertile alluvial soil deposited by floods in the river plains. In the northern fringes of Madhya Pradesh, this soil is periodically replenished with fresh silt, making it highly productive for agriculture. It is distinguished from 'Bangar', which is older alluvium found in upland areas. Khadar soil's high nutrient content supports intensive farming of various seasonal crops.

46. (B) Loss of fertile arable land
The expansion of ravines in northern Madhya Pradesh leads to the significant loss of fertile arable land. As gully erosion progresses, it

the easternmost fringe, while Pench-Kanhan is situated in the southern and western parts of the coal-bearing region. This spatial distribution reflects the geological extent of the Gondwana formations across the central and eastern state.

103. (B) Green marble is primarily extracted from the Alirajpur district.
Madhya Pradesh is known for its diverse marble deposits, including the famous white marble of Bhedaghat. Additionally, green marble is primarily extracted from the Alirajpur district. Marble is a metamorphic rock formed from the recrystallization of limestone under high pressure and temperature. The state possesses its own raw marble resources, reducing the need for imports and supporting local stone industries.

104. (D) Aluminum oxide
Corundum is an extremely hard mineral found naturally in Madhya Pradesh and is chemically a crystalline form of aluminum oxide. It is the second hardest natural mineral after diamond. Because of its hardness, it is used extensively as an abrasive for grinding and polishing applications. Its presence in districts like Sidhi highlights the variety of industrial minerals found within the state's borders.

105. (C) 1962
The Madhya Pradesh State Mining Corporation was established in 1962 to undertake the scientific mining and trading of various minerals. Its goal is to maximize the state's mineral revenue while ensuring sustainable and efficient extraction practices. The corporation plays a central role in managing major and minor mineral resources, participating in the development of the state's mineral-based industrial infrastructure.

106. (B) Superphosphate fertilizers
Rock phosphate extracted in Madhya Pradesh is primarily used for manufacturing superphosphate fertilizers. These fertilizers are essential for providing phosphorus to crops, which is a vital nutrient for plant energy transfer and root development. By supplying raw materials to the fertilizer industry, the state's mining sector plays a direct role in supporting agricultural productivity and food security across the entire country.

107. (A) State Mineral Policy
The State Mineral Policy is the primary document that outlines the strategic goals and regulatory measures for the mining sector in Madhya Pradesh. it provides a framework for mineral exploration, lease allocation, and environmental protection. This policy aims to promote sustainable mining practices, attract investment, and ensure that the state's mineral wealth contributes effectively to its overall economic development.

108. (A) White Marble
Bhedaghat in the Jabalpur district is famous nationwide for its massive deposits of white marble. The Narmada river has carved spectacular marble rocks in this region, creating a unique geological and tourist attraction. This high-quality marble is also extracted for use in construction and handicrafts, making Bhedaghat a significant center for the stone industry and a symbol of Madhya Pradesh's natural beauty.

109. (D) Tungsten
Agargaon in the Hoshangabad district is historically famous for the deposit of tungsten, found as the mineral wolframite. Tungsten is a strategic mineral valued for its high melting point and durability. Although the scale of extraction has varied over time, the presence of these deposits is significant for India's domestic supply of metals used in industrial and defense-related manufacturing processes.

110. (A) Both A and R are true and R is the correct explanation of A.
Madhya Pradesh historically exported a large portion of its mined bauxite to other states for refining. This occurred because the state lacked the large-scale aluminum smelting infrastructure required to process all the extracted ore locally. Consequently, states with established smelting plants, like Uttar Pradesh and Odisha, became the primary destinations for bauxite from regions like the Amarkantak plateau.

111. (D) High extraction and transport costs
A major constraint in the optimum utilization of mineral wealth in Madhya Pradesh is the combination of high extraction and transport costs. Many mineral deposits are located in remote or rugged terrains, making it expensive to set up infrastructure and move heavy ores to

Click Here to Buy book on Amazon

soil health. This sustainable practice also helps in controlling pests and diseases, ensuring long-term agricultural productivity in the region.

56. (A) Soil and water conservation
The Rajiv Gandhi Watershed Management Mission in Madhya Pradesh primarily aims to achieve soil and water conservation through an integrated approach. By managing natural resources at the watershed level, the mission seeks to improve groundwater levels, reduce soil erosion, and enhance agricultural productivity. This initiative prioritizes sustainable development and community involvement to ensure long-term environmental and economic stability for rural areas.

57. (A) Zinc
Zinc deficiency is remarkably widespread across almost all agricultural soils in Madhya Pradesh. This micronutrient is essential for plant growth and development, and its absence can significantly limit crop yields. As a result, farmers are often required to apply zinc supplements to their fields to maintain soil health and ensure the successful cultivation of various staple crops and oilseeds.

58. (B) Topsoil → Subsoil → Weathered Rock → Parent Rock
A typical mature soil profile consists of several distinct layers arranged from the surface downwards. The sequence begins with the topsoil, which is rich in organic matter, followed by the subsoil where minerals accumulate. Below this lies the layer of weathered rock, and finally, the solid parent rock. This structural organization is essential for supporting plant life and managing water infiltration.

59. (C) Deep black soil
Deep black soil is considered to have the highest natural agricultural potential in Madhya Pradesh, even without heavy irrigation. Its exceptional moisture retention capacity allows it to sustain crops throughout the growing season by slowly releasing stored water. This makes it highly productive for various major crops, providing a reliable foundation for the state's agricultural economy in the fertile river valleys.

60. (B) Soil structure destruction
Heavy mechanized farming on deep black soils during wet conditions can lead to the destruction of the soil structure. Because these soils are highly plastic and sticky when wet, the use of heavy machinery can cause significant compaction and damage the soil's natural pores. This reduces aeration and water infiltration, which can negatively impact plant root development and overall agricultural productivity over time.

61. (C) Diamond
The Majhgawan mine in Madhya Pradesh is famous worldwide for the extraction of diamonds. Located in the Panna district, it is the only operational industrial diamond mine in India. The diamonds are found within a kimberlite pipe, a unique geological formation. This mine's output has established Madhya Pradesh as the sole producer of this precious gemstone in the country.

62. (A) Chhattisgarh
Following the bifurcation of Madhya Pradesh in 2000, most of the high-grade iron ore reserves were transferred to the newly formed state of Chhattisgarh. This includes major deposits in the Bastar and Durg regions. While Madhya Pradesh still possesses some iron ore, the most significant and economically valuable reserves are now located within the borders of its neighboring eastern state.

63. (A) Seasonal moisture retention
The cultivation of pulses is highly successful in central Madhya Pradesh due to the soil's excellent seasonal moisture retention. Black soils, which dominate this region, can hold water for extended periods, providing a consistent supply to plants even after the rains have ceased. This property is ideal for pulses, which require steady moisture levels to mature and produce high-quality yields.

64. (B) III only
Madhya Pradesh is India's largest producer of copper ore, with the Malanjkhand project being a major contributor. This project is managed by Hindustan Copper Limited. It is incorrect to say that these deposits lack precious metal traces, as copper ores in the region are often found in association with small but significant amounts of gold and silver, enhancing their overall value.

NODIA

121. (A) E-transit passes and GPS
To curb the illegal transportation of minerals, the Madhya Pradesh Mining Department has increasingly adopted technological tools like e-transit passes and GPS tracking. These systems provide real-time monitoring of mineral movement, ensuring that all transported goods are accounted for and that royalties are properly paid. This digital approach enhances transparency and efficiency in the management and regulation of the mining sector.

122. (D) Abundant limestone availability
The location of large-scale cement manufacturing units in the Satna and Rewa clusters is primarily dictated by the abundant availability of limestone. As limestone is a heavy and bulky raw material, cement plants are ideally situated near its source to minimize transportation costs. This geographic proximity ensures a steady supply for the manufacturing process, making the region a major cement hub.

123. (C) Restoring mined land to use
Mine reclamation is a mandatory process in Madhya Pradesh that involves restoring land that has been disturbed by mining activities to a productive or natural state. This can include re-grading the land, replanting vegetation, or creating water bodies. The goal is to mitigate the environmental impact of mining and ensure the land can be used for agriculture, forestry, or recreation.

124. (B) Caustic soda and chlorine
The industrial town of Nepanagar, known for its newsprint paper mill, requires chemical inputs like caustic soda and chlorine for the paper-making process. These chemicals are originally derived from mineral processing and are essential for bleaching and refining wood pulp. The integration of mineral-derived chemicals into other manufacturing sectors demonstrates the interconnected nature of Madhya Pradesh's industrial economy and its resource base.

125. (A) 1, 3, 2
In terms of the total value of mineral production in India, Odisha consistently leads due to its massive iron ore and bauxite reserves. Rajasthan follows as a major producer of non-metallic minerals and lead-zinc ores. Madhya Pradesh holds the third position among these states, contributing significantly through its production of diamonds, copper, manganese, and high-quality limestone for various industrial uses.

126. (A) Welfare of mining-affected areas
Under the District Mineral Foundation trust framework in Madhya Pradesh, funds collected from miners must be utilized primarily for the welfare of people and areas affected by mining operations. This includes investing in healthcare, education, clean drinking water, and infrastructure development in mining regions. The DMF ensures that local communities directly benefit from the extraction of natural resources in their vicinity.

127. (B) Mandsaur
The extraction of slate in Madhya Pradesh is predominantly associated with the Mandsaur district. This local resource supports a specialized pencil-making and slate-writing industry in the region. The specific geological conditions in Mandsaur produce high-quality slate that is easily split into thin sheets. This unique mineral-based activity provides employment and contributes to the local economy of the western part of the state.

128. (D) Altering flow and habitat
Excessive and unscientific sand mining in rivers most directly contributes to altering the natural river flow and destroying aquatic habitats. This practice destabilizes riverbanks and lowers the water table, impacting both the environment and local water availability. In Madhya Pradesh, regulating sand mining is a major priority for protecting the long-term health of river systems like the Narmada and Ken.

129. (B) Volume or value of extraction
The calculation of royalty to be paid to the state government by mining leaseholders in Madhya Pradesh is based on the volume or value of the minerals extracted. This system ensures that the state receives a fair share of the wealth generated from its natural resources. The specific rates are determined by the type of mineral and its market price, providing a structured revenue stream.

130. (A) Resource-rich with diverse minerals
Based on its geological formations and mineral occurrences, Madhya Pradesh is accurately

Downloaded from www.pdf.tube

75. (D) HINDALCO (Renukoot)
Bauxite reserves from the Amarkantak plateau in Madhya Pradesh primarily supply raw material to the HINDALCO aluminum plant located in Renukoot, Uttar Pradesh. The high-quality bauxite found in this region is essential for aluminum smelting. This cross-state supply chain demonstrates the strategic importance of Madhya Pradesh's mineral resources in supporting large-scale industrial operations across the northern parts of India.

76. (D) Clay swelling and shrinking
The natural aeration of Regur soils in Madhya Pradesh is significantly enhanced by the process of clay swelling and shrinking. During the dry season, the soil shrinks and develops deep cracks, which allow air to reach the deeper layers. When it rains, the soil swells and closes these cracks. This natural cycle improves soil structure and facilitates the exchange of gases.

77. (D) Rock Phosphate
Rock phosphate is the odd one out because it is a non-metallic mineral, primarily used in the production of fertilizers. In contrast, copper ores, manganese, and iron ores are all metallic minerals used in the manufacturing of metals and alloys. This distinction highlights the different industrial roles and chemical properties of the various mineral resources found throughout Madhya Pradesh.

78. (D) Panna
The diamond-bearing kimberlite pipes in Madhya Pradesh are primarily located in the Panna district. This region is the only place in India where diamonds are actively mined on an industrial scale. The presence of these unique geological structures has made Panna famous worldwide, attracting investment and supporting a specialized mining industry that contributes to the state's overall mineral revenue.

79. (B) Copper
The Malanjkhand mine in the Balaghat district is renowned as the largest open-cast copper mine in India. It holds significant reserves of copper ore and is operated by Hindustan Copper Limited. The scale of operations at Malanjkhand makes it a critical site for the domestic production of copper, supporting the national demand for this essential metal in electrical and industrial applications.

80. (D) Khargone
Khargone district does not have significant coal deposits, as it is primarily located in the basaltic terrain of the Malwa plateau and Narmada valley. In contrast, districts like Betul, Chhindwara, and Shahdol are known for their coalfields belonging to the Gondwana rock system. The geological makeup of Khargone is better suited for agriculture and the extraction of other non-fuel minerals.

NODIA

81. (C) Iron and Steel
Dolomite is extensively mined in Madhya Pradesh and serves as a vital flux in the iron and steel industry. Its role is to help remove impurities during the smelting process, improving the quality of the final metal. The state's large dolomite reserves are conveniently located to support major steel plants in central India, making it a key component of the industrial supply chain.

82. (A) Diamond
Madhya Pradesh holds a total monopoly in the production of diamonds in India. The state is the only region in the country where diamonds are commercially extracted, specifically from the mines in the Panna district. This exclusive status makes Madhya Pradesh a unique contributor to the nation's gemstone industry and highlights its specialized geological wealth compared to other Indian states.

83. (D) Sohagpur Coalfield
The Sohagpur coalfield is the largest coalfield in Madhya Pradesh in terms of both geographical area and total reserves. Located in the Shahdol district, it provides a massive supply of bituminous coal for the energy sector. Its extensive size and significant coal seams make it a central hub for the state's mining activities and a major contributor to India's coal production.

84. (C) Sausar Series
Manganese ore in Madhya Pradesh is primarily associated with the Sausar series of rocks. These ancient metamorphic rocks, found in the southern districts like Balaghat and Chhindwara, contain rich deposits of manganese. This

consumes productive fields, making them unsuitable for farming and difficult to manage. This ecological impact threatens the livelihoods of local farmers and reduces the total agricultural output of the region, necessitating urgent soil conservation and ravine reclamation efforts.

47. (B) Sidhi
The Sidhi district is least likely to have deep black soil because it is located in the eastern part of Madhya Pradesh, which is dominated by red and yellow soils. Deep black soil is primarily found in the central Narmada valley and parts of Malwa. Sidhi's geological makeup consists of older crystalline rocks that weather differently, resulting in a distinct soil profile.

48. (B) Shifting cultivation
Shifting cultivation is considered the odd one out because it is a practice that often leads to soil erosion and degradation, rather than conservation. In contrast, strip cropping, mulching, and crop rotation are recognized soil conservation methods used to protect the soil surface, maintain nutrient levels, and reduce runoff. Eliminating shifting cultivation is a key goal for sustainable land management in the state.

49. (A) 2, 4, 3, 1
Water erosion typically progresses through four chronological stages. It begins with splash erosion from raindrops, followed by sheet erosion where a uniform layer of soil is removed. As runoff concentrates, rill erosion forms small channels. Finally, if left unchecked, these develop into deep gullies, known as gully erosion. Recognizing this sequence helps in applying the correct conservation techniques at each stage.

50. (A) I, II, IV, and V
Correct soil conservation methods in Madhya Pradesh include contour farming, terracing, afforestation, and the construction of check dams. These practices are designed to slow down water runoff, stabilize the soil, and prevent the loss of fertile topsoil. Overgrazing is excluded as it is a major cause of soil degradation, as it removes the protective vegetative cover and compacts the earth.

51. (D) They are highly porous and inherently poor in essential nutrients.
A primary limitation of Laterite soils in Madhya Pradesh is their high porosity and inherent lack of essential nutrients. Because these soils are formed through intense leaching, many vital minerals are washed away, leaving the soil relatively infertile. This requires farmers to use significant amounts of fertilizers and organic matter to support crop growth, making intensive agriculture more challenging and expensive.

52. (D) Construction of check dams
The construction of check dams is a major structural measure used in the Chambal ravines to control soil erosion. These small dams are built across gullies to slow down the flow of water and trap sediment. By reducing the velocity of runoff, check dams prevent the gullies from deepening and widening, facilitating the gradual reclamation of the land for agricultural or forest use.

53. (C) Planting cover crops
Planting cover crops is a primary vegetative measure used to control soil erosion in the sloping lands of the Satpura region. These crops, such as legumes or grasses, provide a protective layer that covers the soil surface, reducing the impact of raindrops and slowing surface runoff. This practice helps maintain soil structure, increases organic matter, and prevents the loss of fertile topsoil.

54. (C) Replenished by river floods
Alluvial soil in Madhya Pradesh is characterized by being periodically replenished by river floods. This process deposits fresh layers of nutrient-rich silt and sediment, maintaining the soil's high fertility over time. This natural replenishment is vital for the intensive cultivation of crops like wheat and sugarcane in the northern plains, making it one of the most productive soil types in the state.

55. (A) Maintaining nutrient balance
The practice of crop rotation benefits the mixed red and black soils of the Bundelkhand region by maintaining the nutrient balance. By alternating different types of crops, such as legumes and cereals, farmers can prevent the depletion of specific soil nutrients and improve

Click Here to Buy book on Amazon

specialized ceramic products. Their extraction contributes significantly to the state's industrial mineral output and supports various manufacturing sectors.

94. (C) P-3, Q-1, R-4, S-2
Major mining locations in Madhya Pradesh are associated with specific minerals. Majhgawan is famous for diamonds, while Malanjkhand is the largest source of copper. Bharveli is a key site for high-grade manganese, and the Amarkantak plateau is known for its extensive bauxite reserves. This mapping demonstrates the diverse and geographically distributed mineral wealth that forms the backbone of the state's extractive industry.

95. (B) Betul
Tin ore, also known as cassiterite, has been historically reported in minor quantities in the Betul district of Madhya Pradesh. While the deposits are not currently exploited on a large industrial scale, their presence is geologically interesting. This highlights the diversity of metallic minerals found in the southern parts of the state, which host a wide range of resources beyond coal and copper.

96. (B) Regional exploration and mapping
The primary role of the Geological Survey of India concerning Madhya Pradesh is to conduct regional mineral exploration and detailed geological mapping. By identifying new mineral deposits and characterizing existing ones, the GSI provides the scientific data necessary for the state's mining department and private companies to develop resources effectively. This work is fundamental to the long-term growth of the state's mineral sector.

97. (D) Jhabua
Jhabua district is the principal producer of rock phosphate in Madhya Pradesh. This non-metallic mineral is essential for the manufacturing of superphosphate fertilizers, which are vital for enhancing agricultural productivity. The presence of these deposits in the western part of the state provides a local source of raw material for the chemical industry, supporting both industrial development and food security.

98. (A) Narmada
The riverbeds of the Narmada in Madhya Pradesh are occasionally known for the panning of semi-precious stones and agates. Over time, the river transports various mineral fragments from the surrounding geological formations, depositing them along its banks. This traditional activity reflects the rich mineral diversity of the Narmada basin and provides a source of raw materials for local gemstone and handicraft industries.

99. (B) Narmada
Illegal sand mining in Madhya Pradesh has been most prominently associated with the Narmada river basin. This activity causes severe ecological concerns, including the alteration of river flow, destruction of aquatic habitats, and erosion of riverbanks. The state government has implemented various regulatory measures to control this practice and protect the ecological integrity of the Narmada, which is considered a lifeline for the region.

100. (C) Vindhyan
The historically significant red sandstone used for monuments like the Sanchi Stupa and Gwalior Fort belongs to the Vindhyan geological system. These ancient sedimentary rocks are prized for their durability and attractive color. The widespread availability of this high-quality building stone across central India has played a crucial role in the architectural development and cultural heritage of the Madhya Pradesh region.

101. (B) III and V
The Mineral Policy of Madhya Pradesh focuses on value addition, transparency through e-auctions, and environmental reclamation. It is incorrect to say that it prohibits foreign direct investment or exempts small-scale miners from royalties entirely. Instead, the policy aims to attract investment and ensure that all mining activities contribute to state revenue while maintaining high environmental and social standards for local communities.

102. (A) Singrauli → Sohagpur → Umaria → Pench-Kanhan
When arranged geographically from east to west, the major coalfields of Madhya Pradesh follow the sequence: Singrauli, Sohagpur, Umaria, and then Pench-Kanhan. Singrauli is located on

Downloaded from www.pdf.tube

association is geologically significant because the Sausar series provides the high-grade ore needed for steel manufacturing, establishing the state as a leading producer of this vital metallic mineral.

85. (C) Cement Industry
The abundance of limestone in the Katni and Satna districts has led to a heavy concentration of the cement industry in this region. Limestone is the primary raw material for cement production, and its local availability significantly reduces transportation costs for manufacturing units. This strategic cluster has made Madhya Pradesh one of the leading cement-producing states in India, supporting national infrastructure development.

86. (B) Mulching and cover crops
Mulching and the use of cover crops are recognized as biological methods of soil conservation in Madhya Pradesh. These practices involve using organic materials or living plants to protect the soil surface from the erosive forces of rain and wind. By maintaining a protective layer, these methods help reduce runoff, improve soil moisture, and enhance fertility through the gradual addition of organic matter.

87. (B) Aluminium
Bauxite is the primary ore processed to extract aluminum, a crucial metal for various industries including aerospace, construction, and packaging. In Madhya Pradesh, significant bauxite deposits are found in regions like the Amarkantak plateau. The extraction and processing of this ore support the domestic aluminum industry, highlighting the state's role in providing essential raw materials for modern technological and industrial applications.

88. (B) P-2, Q-1, R-4, S-3
Major minerals in Madhya Pradesh are concentrated in specific districts. Copper is predominantly produced in Balaghat, while Singrauli is the leading hub for coal production. Bauxite is found in the Anuppur district, specifically on the Amarkantak plateau, and Katni is a major center for limestone. This regional distribution of mineral wealth supports diverse industrial sectors across the state and beyond.

89. (B) Betul
In addition to the massive reserves in Balaghat, the Betul district in Madhya Pradesh also has significant occurrences of copper ore. While the scale of production is smaller than in Malanjkhand, these deposits contribute to the state's overall copper resources. The presence of copper in Betul highlights the varied geological formations in the southern part of the state that host valuable metallic minerals.

90. (A) Central India and Satpura Coalfields
The coalfields of Madhya Pradesh are broadly classified into two major regions: the Central India coalfields and the Satpura coalfields. The Central India region includes sites like Singrauli and Sohagpur, while the Satpura region encompasses Pench-Kanhan and Betul. This classification is based on their geographic location and geological characteristics, representing the primary areas of coal extraction and energy production.

91. (B) Bundelkhand Plateau
Granite quarrying is a significant economic activity on the Bundelkhand plateau in northern Madhya Pradesh. The region is known for its ancient granitic and gneissic rocks, which are extracted for use as building materials and decorative stones. The durability and aesthetic appeal of the granite found here have made it a valuable resource for both domestic construction and international export.

92. (C) Tungsten (Wolframite)
Tungsten, found as wolframite in Agargaon, is considered a strategic mineral in Madhya Pradesh. It is crucial for national security and advanced technology due to its high melting point and hardness. Tungsten is used in manufacturing high-speed cutting tools, electrical filaments, and defense equipment. Its presence in the state represents a valuable asset for India's strategic industrial and technological self-reliance.

93. (C) Ceramics and Refractory
Pyrophyllite and diaspore are minerals found occurring together in Madhya Pradesh and are primarily used in the ceramics and refractory industries. These minerals can withstand high temperatures without losing their structural integrity, making them ideal for manufacturing kiln linings, laboratory equipment, and

NODIA

industrial centers. These costs can impact the competitiveness of the state's minerals in the domestic and international markets.

112. (B) Gondwana coal seams
Fireclay deposits in Madhya Pradesh are typically found associated with Gondwana coal seams. This sedimentary clay is highly resistant to heat, making it valuable for the production of refractory bricks used in furnaces and kilns. The geological association between coal and fireclay allows for integrated mining operations, where both resources can be extracted from the same sedimentary sequences in the state.

113. (D) Mandla
The Jabalpur district is known for the occurrence of fluorite deposits in Madhya Pradesh. Fluorite, also known as fluorspar, is a mineral used as a flux in steelmaking and in the production of hydrofluoric acid. Its presence in the state adds to the diversity of industrial minerals available for chemical and metallurgical applications, supporting the broader industrial base of central India.

114. (B) Deforestation and pollution
Open-cast coal mining in the Singrauli region has led to significant environmental impacts, most notably widespread deforestation and environmental pollution. The removal of topsoil and vegetation to access coal seams destroys local ecosystems and affects air and water quality. Addressing these issues through land reclamation and stricter environmental regulations is a critical challenge for balancing energy production with ecological sustainability.

115. (D) Dolomite
Dolomite, found in the Jhabua and Alirajpur districts, is used both to mitigate soil acidity and in the cement industry. As a source of calcium and magnesium, it can neutralize acidic soils, improving conditions for agriculture. In cement manufacturing, it serves as a raw material and flux. Its versatile applications make dolomite an important mineral for both the industrial and agricultural sectors.

116. (D) Extreme weathering and leaching
Bauxite deposits in the Maikal range form through the extreme weathering and leaching of parent rocks under tropical conditions. Heavy rainfall washes away soluble components like silica, leaving behind a residue rich in aluminum and iron oxides. This natural process results in the formation of thick bauxite caps on high-altitude plateaus, which are then mined for aluminum extraction in the state.

117. (D) 1995
The Government of Madhya Pradesh announced its first comprehensive State Mineral Policy in 1995. This landmark policy was designed to modernize the mining sector, encourage private investment, and streamline the administrative processes for mineral leases. By setting clear guidelines for exploration and extraction, the 1995 policy laid the foundation for the structured development of the state's vast mineral resources.

118. (A) I, II, and IV
The Bharveli mine is recognized as Asia's largest underground manganese mine, and Malanjkhand holds the largest copper reserves in India. Copper from the state is processed by Hindustan Copper Limited. However, it is incorrect to say manganese is only found in sedimentary rocks, as the high-grade deposits in Madhya Pradesh are primarily associated with metamorphic rocks of the Sausar series.

119. (A) Non-tax revenue
Royalties collected from mining operations form a significant part of Madhya Pradesh's non-tax revenue. Unlike taxes, royalties are payments made by mining companies to the state for the right to extract its natural resources. This revenue stream is vital for funding public infrastructure, social welfare programs, and the overall administrative expenses of the state government, highlighting the mining sector's importance.

120. (A) Sidhi
The Sidhi district is recognized for the occurrence of corundum, an extremely hard mineral used as an abrasive. Corundum is found in various geological formations in this region and is valued for its industrial applications in grinding and polishing. The presence of this mineral in Sidhi highlights the district's contribution to the diverse portfolio of non-metallic minerals found in Madhya Pradesh.

Click Here to Buy book on Amazon

65. (A) Singrauli
The Singrauli coalfield in Madhya Pradesh is famous for hosting one of the thickest coal seams in Asia, known as the Jhingurda seam. This massive deposit makes the region a critical hub for coal mining and power generation in India. The abundance of coal in Singrauli supports several large thermal power plants, significantly contributing to the nation's total energy production.

66. (A) Magnesium
Dolomite is a mineral similar to limestone but is distinguished by its high magnesium content. It is a double carbonate of calcium and magnesium. In Madhya Pradesh, dolomite is widely found and used in various industries, particularly as a flux in iron and steel manufacturing. Its presence in the geological formations of the state makes it a valuable industrial mineral.

67. (C) Black Soil
Black soil, also known as Regur, covers the largest percentage of the total geographical area of Madhya Pradesh. It is primarily found in the Malwa plateau, the Narmada valley, and parts of the Satpura range. This soil type is renowned for its fertility and moisture-retention capabilities, making it the most important soil for the state's extensive agricultural activities and crop production.

68. (B) Vindhyan
Limestone is found in abundance in Madhya Pradesh primarily due to the extensive presence of the Vindhyan rock system. This ancient sedimentary formation contains thick layers of high-quality limestone, which is a key raw material for the cement industry. The distribution of these rocks across the northern and central parts of the state has led to the concentration of major manufacturing units.

69. (A) Bharveli
The Bharveli mine in the Balaghat district is renowned for producing high-grade manganese ore. It is recognized as the largest underground manganese mine in Asia. The ore from this mine is valued for its high purity and is essential for the production of steel and various alloys. This location remains a cornerstone of the manganese mining industry in Madhya Pradesh.

70. (C) Gondwana System
Coal deposits in Madhya Pradesh primarily belong to the Gondwana rock system. These ancient geological formations were created from the remains of prehistoric forests and contain significant reserves of bituminous coal. The Gondwana coalfields are distributed across the eastern and southern parts of the state, providing a vital source of energy for power plants and various industrial sectors in India.

71. (A) P-2, Q-1, R-4, S-3
Minerals in Madhya Pradesh serve various industrial purposes. Rock phosphate is essential for the fertilizer industry, while limestone is the primary raw material for cement manufacturing. Fireclay is used to produce refractory bricks capable of withstanding high temperatures, and bauxite is the main source for aluminum extraction. These mineral resources support a wide range of industrial activities across the state.

72. (B) Old alluvial soil terraces
In the context of the northern plains, 'Bangar' refers to the older alluvial soil found in upland terraces. Unlike the newer 'Khadar' soil, Bangar is located above the current flood levels and often contains calcareous deposits known as kankar. This soil is generally less fertile than Khadar but still supports agricultural activities with the help of irrigation and proper management.

NODIA

73. (D) Hematite
Hematite iron ore is predominantly found in the Jabalpur and Mandla districts of Madhya Pradesh. This variety of iron ore is characterized by its high iron content and is widely used in the steel industry. The presence of hematite reserves in these regions provides an important raw material base for domestic industrial consumption and contributes to the state's total mineral output.

74. (C) Umaria Coalfield
The Umaria coalfield is recognized as the smallest coalfield in Madhya Pradesh based on its geographical area. Despite its compact size, it contains significant coal seams belonging to the Gondwana system. This coalfield has been a source of fuel for local industries and power generation, highlighting the importance of even small mineral deposits in the state's overall resource landscape.

described as a resource-rich state with diverse minerals. It possesses everything from coal and iron ore to diamonds and manganese. This variety of resources supports a wide range of industries and positions the state as a critical contributor to India's overall mineral production and economic growth.

www.nodia.in

Downloaded from www.pdf.tube

(B) The Nimar region (Khargone and Khandwa) is known as the "White Gold" area due to cotton cultivation.
(C) Cotton thrives best in the deep black soils of the state.
(D) Both indigenous and Bt Cotton varieties are cultivated in the state.

18. Consider the following statements regarding rice cultivation in Madhya Pradesh:
Statement I: The eastern and south-eastern parts of Madhya Pradesh are the primary rice-producing regions.
Statement II: These regions receive higher annual rainfall compared to the western parts of the state.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

19. In the context of agriculture in Madhya Pradesh, an Assertion (A) and a Reason (R) are provided below.
Assertion (A): Jowar and Bajra are extensively cultivated in the western and north-western districts of Madhya Pradesh.
Reason (R): These regions are relatively drought-prone and receive low annual rainfall, making them suitable for hardy millets.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

20. Consider the following statements regarding Gram (Chana) cultivation in Madhya Pradesh:
I. It is the most important Rabi pulse crop in the state.
II. Vidisha and Ashoknagar are among the major producing districts.
III. It requires deep black soil and highly humid conditions throughout its growth.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II and III

21. Identify the correct pair regarding crop specialization in Madhya Pradesh:
(A) Sugarcane - Mandla
(B) Cotton - Rewa
(C) Grapes - Ratlam
(D) Opium - Balaghat

22. During the Rabi season, wheat cultivation in the Malwa plateau benefits significantly from which of the following climatic factors?
(A) The occurrence of heavy monsoonal floods during the peak winter months.
(B) Mild winter temperatures and moisture retention in deep black soil.
(C) Extreme heat and high summer temperatures immediately preceding the sowing.
(D) Frequent coastal cyclonic disturbances that bring excessive and unseasonal rain.

23. Which among the following varieties of rice has been granted a Geographical Indication (GI) tag from the Balaghat district of Madhya Pradesh?
(A) Basmati
(B) Sharbati
(C) Kali Mooch
(D) Chinnor

24. Find the odd one out concerning the major commercial crops of Madhya Pradesh:
(A) Cotton
(B) Sugarcane
(C) Opium
(D) Kodo-Kutki

25. The term "cropping intensity" in the context of Madhya Pradesh's agricultural land use is best defined as:
(A) The ratio of net sown area to the total geographical area of the state.
(B) The ratio of gross cropped area to the net sown area, multiplied by 100.
(C) The percentage of agricultural land under assured irrigation.
(D) The total volume of crops produced per hectare of arable land.

NODIA

STUDYING FROM PDFs?

THINK AGAIN.

If you are studying only from PDFs,
you are wasting valuable time.

Research shows that learning from

PRINTED BOOKS has up to

4× HIGHER RETENTION

than studying from screens.

PRINT BOOK = BETTER MEMORY

PDF = LOWER RETENTION

Those who study from **PRINTED BOOKS**
move **AHEAD.**

Others are left **BEHIND**
in competition.

In competitive exams,
being average is not enough.

STAY ONE STEP AHEAD.

(C) Bhind, Morena, and other regions in the northern Gird tract.
(D) Dindori, Mandla, and the high-altitude eastern plateau regions.

9. In the context of drought-prone agriculture, how does the physiological adaptation of Jowar benefit farmers in the Bhind-Morena tract?
(A) It requires standing water which naturally suppresses local weed growth.
(B) Its deep root system allows for the utilization of sub-soil moisture.
(C) It matures in under 30 days, avoiding the start of the dry season.
(D) It absorbs moisture from the atmosphere via highly specialized leaves.

10. What is the primary cause for the relatively lower yield of rice per hectare in certain northern districts of Madhya Pradesh compared to the eastern districts?
(A) A complete and total absence of fertile alluvial soil throughout the region.
(B) High susceptibility to severe frost during the critical stages of harvesting.
(C) Low rainfall and the absence of extensive wetland irrigation infrastructure.
(D) An over-reliance on traditional organic farming methods without official certification.

11. Consider the following statements regarding oilseeds cultivation in Madhya Pradesh:
I. Madhya Pradesh is among the leading states in overall oilseed production in India.
II. Mustard is primarily grown in the central districts like Bhopal and Raisen.
III. Groundnut is largely cultivated in the Malwa and Nimar regions.
IV. Soybean is the most dominant oilseed crop in the state.
Which of the given combinations is correct?
(A) I, II and IV only
(B) I, III and IV only
(C) II, III and IV only
(D) I, II, III and IV

12. Identify the incorrect pair regarding crops and their primary growing seasons in Madhya Pradesh:
(A) Wheat - Rabi
(B) Soybean - Kharif
(C) Mustard - Kharif
(D) Moong - Zaid

13. Consider the following statements regarding Moong cultivation:
Statement I: Moong is often cultivated as a catch crop during the Zaid season in areas with irrigation facilities.
Statement II: It helps in enhancing soil fertility through biological nitrogen fixation.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

14. Madhya Pradesh is widely recognized as the 'Soy State' of India. In which agricultural region is soybean cultivated most extensively?
(A) Baghelkhand Plateau
(B) Bundelkhand Plateau
(C) Malwa Plateau
(D) Nimar Plains

15. The first sugar mill of Madhya Pradesh was established in which of the following districts?
(A) Sehore
(B) Narsinghpur
(C) Indore
(D) Ratlam (Jaora)

16. In Madhya Pradesh, the Kharif cropping season generally corresponds to which of the following sowing and harvesting periods?
(A) Sown in June-July and harvested in September-October
(B) Sown in October-November and harvested in March-April
(C) Sown in March-April and harvested in May-June
(D) Sown in January-February and harvested in April-May

17. Which of the following statements about cotton production in Madhya Pradesh is incorrect?
(A) It is primarily cultivated as a Rabi season crop.

Click Here to Buy book on Amazon

(A) I, II, IV, III
(B) I, IV, II, III
(C) II, I, IV, III
(D) III, IV, II, I

35. In which of the following towns of Madhya Pradesh is the Government Opium and Alkaloid Works located?
(A) Neemuch
(B) Ratlam
(C) Ujjain
(D) Dewas

36. Which of the following best represents the water resources scenario of Madhya Pradesh?
(A) Rich in surface water as it is the origin of several major river systems.
(B) Highly dependent on groundwater with almost completely depleted surface water sources.
(C) Entirely reliant on trans-boundary rivers originating solely from the Himalayan ranges.
(D) Characterized by abundant perennial lakes with a minimal riverine network.

37. Which of the following districts is an exception and NOT a major producer of Mustard in Madhya Pradesh?
(A) Anuppur
(B) Morena
(C) Bhind
(D) Gwalior

38. Identify the correct statement regarding agricultural wastelands in Madhya Pradesh:
(A) Wastelands cannot be brought under cultivation even with modern technology.
(B) The process of wasteland reclamation decreases the total net sown area of the state.
(C) Madhya Pradesh has zero percent wasteland due to complete irrigation coverage.
(D) The Chambal region accounts for most of the state's ravine-affected wasteland.

39. Which district of Madhya Pradesh was initially selected under the Intensive Agricultural District Programme (IADP) to kickstart modern agricultural practices during the early phases of the Green Revolution?
(A) Sehore
(B) Raisen
(C) Jhabua
(D) Raipur (undivided MP)

40. Find the odd one out regarding major spice producing regions of Madhya Pradesh:
(A) Mandsaur (Garlic)
(B) Guna (Coriander)
(C) Khargone (Chilly)
(D) Sheopur (Cardamom)

41. What is a primary cause for the critical depletion of groundwater levels in the Malwa region of Madhya Pradesh?
(A) The high levels of natural salinity found within the regional groundwater aquifers.
(B) Over-extraction for water-intensive crops without adequate groundwater recharge.
(C) Excessive afforestation programs leading to exceptionally high transpiration rates.
(D) A shift from modern tube wells back to ancient tank irrigation methods.

42. Which of the following is an incorrect statement regarding the horticulture sector in Madhya Pradesh?
(A) Burhanpur is recognized as the primary banana-producing district of the state.
(B) Guava is extensively cultivated in districts like Rewa and Narmadapuram.
(C) The 'Bhavantar Bhugtan Yojana' was launched to ensure fixed export prices for all fruits.
(D) The state ranks among the top producers of garlic and onion in the entire country.

NODIA

43. What is a primary cause for the increase in "current fallow" lands in certain rainfed regions of Madhya Pradesh during a drought year?
(A) The implementation of excessive mechanization on small-scale rainfed farms.
(B) Delayed or deficient monsoon rains preventing the timely sowing of crops.
(C) An over-availability of subsidized seeds leading to market saturation.
(D) Strict implementation of organic farming policies by the state government.

44. The "net sown area" of Madhya Pradesh is best defined as:

26. Madhya Pradesh is one of the leading producers of wheat in India. Which of the following districts is traditionally renowned for the highest production of premium quality wheat (like Sharbati)?
(A) Balaghat
(B) Mandla
(C) Jhabua
(D) Sehore

27. What is the primary reason for the heavy concentration of sugarcane cultivation in the Narsinghpur district of Madhya Pradesh?
(A) Deep alluvial soils combined with extensive canal irrigation networks.
(B) Consistently high winter temperatures that prevent frost damage.
(C) A strict government mandate restricting cultivation to this district.
(D) The total and complete absence of agricultural pests in the region.

28. Match the following crops in List-I with their leading producing regions or districts in Madhya Pradesh in List-II:
List I: (Crop)
P. Soybean
Q. Rice
R. Sugarcane
S. Opium
List II: (Producing Region/District)
1. Balaghat
2. Mandsaur
3. Narsinghpur
4. Ujjain
(A) P-4, Q-1, R-3, S-2
(B) P-1, Q-4, R-2, S-3
(C) P-4, Q-3, R-1, S-2
(D) P-3, Q-1, R-4, S-2

29. Which region of Madhya Pradesh is traditionally most associated with Bajra cultivation due to its semi-arid conditions?
(A) Mahakoshal Region
(B) Narmada Valley
(C) Gird Region (Chambal division)
(D) Satpura-Maikal range

30. Which of the following is a correct statement regarding the status of pulses cultivation in Madhya Pradesh?
(A) Tur (Arhar) is predominantly cultivated as a Rabi crop in the state.
(B) Gram (Chana) requires heavy rainfall and waterlogged conditions for optimal growth.
(C) Pulses are primarily grown in the coastal-like microclimates of the state.
(D) The state holds the first rank in overall pulses production in India.

31. What is Madhya Pradesh's approximate rank in the national production of Onion and Garlic?
(A) First in Garlic and top three in Onion
(B) Fifth in Garlic and tenth in Onion across national production
(C) Last in both categories due to unsuitable soil conditions
(D) Second in Garlic and last in Onion among all Indian states

32. Identify the correct pair representing wasteland types and their prominent location in Madhya Pradesh:
(A) Waterlogged wastelands - High slopes of Satpura
(B) Ravine and Gully eroded lands - Chambal Basin
(C) Saline soils - Deep valleys of Patalkot
(D) Sandy deserts - Amarkantak plateau

33. Consider the following statements regarding Sunflower cultivation:
Statement I: Sunflower is photo-insensitive and can be grown in multiple seasons.
Statement II: It requires highly water-logged, marshy lands for optimum seed production.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

34. Arrange the following districts of Madhya Pradesh in descending order based on their typical wheat production levels:
I. Hoshangabad (Narmadapuram)
II. Sehore
III. Alirajpur
IV. Vidisha

NODIA

CHAPTER 13
Agriculture and Water Resources

1. Find the odd one out in the context of major rice-producing districts in Madhya Pradesh:
(A) Balaghat
(B) Seoni
(C) Mandla
(D) Khargone

2. Maize is widely grown in Madhya Pradesh. Which of the following statements is not true regarding its regional spread?
(A) It is predominantly grown in the tribal-dominated districts like Chhindwara and Jhabua.
(B) It requires well-drained soils and cannot withstand severe waterlogging.
(C) It is strictly a Rabi crop across the entirety of the state.
(D) Chhindwara is often referred to as the "Corn City" of Madhya Pradesh.

3. Which of the following statements is incorrect regarding the Zaid cropping season in Madhya Pradesh?
(A) It is considered a primary summer season crop cycle within the central Indian climate.
(B) The crops are highly dependent on assured irrigation.
(C) It is the longest season and accounts for the state's maximum sown area.
(D) Major crops grown include watermelon, muskmelon, and high-water content cucumbers.

4. Which of the following represents the correct order of regions in Madhya Pradesh from highest to lowest in terms of traditional cotton production?
(A) Nimar > Malwa > Bundelkhand > Baghelkhand
(B) Baghelkhand > Bundelkhand > Malwa > Nimar
(C) Nimar > Baghelkhand > Malwa > Bundelkhand
(D) Bundelkhand > Nimar > Baghelkhand > Malwa

5. All of the following are major challenges for soybean cultivation in Madhya Pradesh, except:
(A) Vulnerability to yellow mosaic virus
(B) Lack of international demand for soybean extraction products
(C) Erratic monsoon patterns causing waterlogging or drought
(D) High requirement of manual labor for harvesting compared to other oilseeds

6. Identify the correct statement regarding sugarcane cultivation in Madhya Pradesh:
(A) Madhya Pradesh is the largest producer of sugarcane in India.
(B) It is a water-intensive cash crop requiring assured irrigation.
(C) Sugarcane is a short-duration crop that matures in three months.
(D) Cultivation is entirely restricted to the hilly tracts of the Mock Vindhyan range.

7. Which of the following best describes the primary contribution of the agriculture sector to the economy of Madhya Pradesh?
(A) It attracts the highest amount of foreign direct investment into the state's industrial sectors.
(B) It functions as the main source of livelihood for the majority of the rural population.
(C) It relies on corporate-led plantation exports to dominate the state's agricultural economy.
(D) It contributes the largest proportion of industrial tax revenue to the state's public exchequer.

8. In which of the following districts of Madhya Pradesh is Tur (Arhar) predominantly cultivated?
(A) Jhabua, Alirajpur, and nearby western tribal districts.
(B) Narsinghpur and Chhindwara

Downloaded from www.pdf.tube

(A) The total geographical area minus the forest cover.
(B) The total area under assured canal irrigation.
(C) The sum total of areas sown in Kharif, Rabi, and Zaid seasons combined without deducting overlapping areas.
(D) The physical extent of land on which crops are sown and harvested at least once during an agricultural year.

45. Find the odd one out with respect to the promotion of organic farming in Madhya Pradesh:
(A) Avoidance of synthetic chemical fertilizers
(B) Use of Vermicompost
(C) Intensive application of Endosulfan
(D) Crop rotation using leguminous crops

46. In the agricultural landscape of Madhya Pradesh, groundnut is primarily cultivated as a:
(A) Rabi crop
(B) Kharif crop
(C) Zaid crop
(D) Plantation crop

47. Consider the following statements regarding yield gaps in agriculture:
Statement I: The yield gap is the difference between the potential yield of a crop under optimal conditions and the actual yield realized by farmers.
Statement II: In Madhya Pradesh, lack of access to timely irrigation and quality seeds contributes significantly to this yield gap.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

48. The concentration of garlic production in the Mandsaur and Ratlam districts is primarily a result of:
(A) State subsidies granted exclusively to these two districts.
(B) Favorable climatic conditions and the presence of fertile black soils.
(C) High altitude preventing any other crop from growing.
(D) Proximity to the sea ports for direct export.

49. Which of the following is not a recognized method for the reclamation of ravine wastelands in Madhya Pradesh?
(A) Promoting intensive monoculture of water-demanding crops like paddy.
(B) Mechanical leveling of uneven land using heavy specialized machinery.
(C) Construction of peripheral bunds to prevent soil runoff during heavy rain.
(D) The active afforestation and pasture development on slopes to stabilize the soil.

50. Consider the following statements regarding land reclamation and fallow lands in Madhya Pradesh:
I. Fallow lands are those left uncultivated temporarily to regain fertility.
II. The Chambal ravines are classified as severe wastelands requiring reclamation.
III. Ravine reclamation involves aerial seeding and terracing.
IV. Current fallow lands are left uncultivated for more than five years.
V. Agro-forestry is a suggested measure to reclaim culturable wastelands.
Which of the given combinations is incorrect?
(A) I and II only
(B) IV only
(C) III, IV and V only
(D) II and V only

51. Which of the following is a negative or limiting factor for surface water utilization in Madhya Pradesh?
(A) The state possesses no major river basins within its geographical boundaries.
(B) The local topography completely prevents the construction of dams and reservoirs.
(C) There is absolute uniformity in annual rainfall across all districts of the state.
(D) Rivers exhibit high seasonal variability, drying up during the summer months.

52. An agronomist wishes to establish a commercial chilly processing unit near the highest raw material producing zone in Madhya Pradesh. Which district would be the most appropriate choice?

NODIA

Statement I: It features a concrete gravity dam situated downstream of the Indira Sagar Project.
Statement II: The project's canal system provides irrigation facilities to parts of the Nimar and Malwa regions.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

70. Identify the incorrect statement regarding rainwater harvesting practices in Madhya Pradesh:
(A) Traditional structures like 'Bawdis' (stepwells) have historically aided in water conservation.
(B) Rooftop rainwater harvesting has been made mandatory for specific building sizes in urban areas.
(C) The state government entirely bans the construction of small check dams on seasonal streams.
(D) The 'Jalabhishekam' campaign was launched to promote water conservation structures.

71. Consider the following statements regarding the Chambal Valley Development Project:
I. It is a joint venture between Madhya Pradesh and Rajasthan.
II. Gandhi Sagar Dam is located in the Mandsaur district of Madhya Pradesh.
III. Rana Pratap Sagar Dam is situated in Madhya Pradesh.
IV. Jawahar Sagar Dam is located in Rajasthan.
Which of the given combinations is correct?
(A) I, II and IV only
(B) I, II and III only
(C) II, III and IV only
(D) I, III and IV only

72. The Ramsar Convention recognized which of the following water bodies in Madhya Pradesh as a wetland of international importance in 2002?
(A) Yashwant Sagar
(B) Bhoj Wetland (Upper Lake)
(C) Sankhya Sagar
(D) Sirpur Lake

73. Find the odd one out among these prominent irrigation projects and their alternative names in Madhya Pradesh:
(A) Bargi Project - Rani Avanti Bai Sagar
(B) Tawa Project - Indira Sagar
(C) Bawan Thadi Project - Rajiv Sagar
(D) Rajghat Project - Rani Laxmibai Sagar

74. Why is tank irrigation historically more prominent in the eastern and south-eastern districts (like Balaghat and Seoni) of Madhya Pradesh compared to the western districts?
(A) The western districts receive over 200 cm of annual rainfall, making tanks redundant.
(B) The soil in the eastern districts is highly sandy, preventing tube well construction.
(C) Crystalline rock and undulating topography provide natural depressions for storage.
(D) State legislation strictly prohibited tank construction in the Malwa region regions.

75. A farmer in the Hoshangabad district shifted from single-crop rainfed farming to intense double-cropping of Wheat and Soybean. This transformation was largely facilitated by the command area development of which project?
(A) Halali Project
(B) Rajghat Project
(C) Bansagar Project
(D) Tawa Project

76. The catchment area of the Son River primarily falls under which major river basin system?
(A) Godavari Basin
(B) Narmada Basin
(C) Tapi Basin
(D) Ganga Basin

77. The Bargi diversion project (Left Bank Canal) is designed to carry water primarily to which drought-prone districts?
(A) Rewa and Satna
(B) Gwalior and Morena
(C) Bhopal and Sehore
(D) Katni and Rewa

78. A farmer in a water-scarce area of Dewas implements a farm pond (Kapil Dhara) on his

Click Here to Buy book on Amazon

61. Which of the following statements is incorrect regarding groundwater availability in Madhya Pradesh?
(A) Hard rock terrains of the state limit the aquifer recharge capacities.
(B) Districts in the western part of the state show a higher stage of groundwater extraction.
(C) The state has uniform groundwater availability across all its districts.
(D) Government initiatives promote artificial recharge to augment groundwater.

62. The Indira Sagar Project, one of the most critical multipurpose projects in Madhya Pradesh, is situated at which location?
(A) Punasa, Khandwa
(B) Mandhata, Omkareshwar
(C) Bargi, Jabalpur
(D) Deolond, Shahdol

63. Identify the correct statement regarding lakes and reservoirs in Madhya Pradesh:
(A) Tawa Reservoir is situated in the Hoshangabad (Narmadapuram) district.
(B) Bhojtal (Upper Lake) in Bhopal is a naturally formed crater lake.
(C) The state has no artificial reservoirs; all water bodies are natural.
(D) The reservoirs in MP are primarily designed for navigational purposes only.

64. Which of the following represents the correct sequence of major dams constructed on the Narmada River, arranged from upstream (East) to downstream (West)?
(A) Bargi Dam → Indira Sagar Dam → Omkareshwar Dam → Maheshwar Dam
(B) Indira Sagar Dam → Bargi Dam → Maheshwar Dam → Omkareshwar Dam
(C) Omkareshwar Dam → Indira Sagar Dam → Bargi Dam → Maheshwar Dam
(D) Bargi Dam → Maheshwar Dam → Omkareshwar Dam → Indira Sagar Dam

65. Consider the following statements regarding canal irrigation in Madhya Pradesh:
Statement I: The Hoshangabad and Harda districts benefit significantly from the Tawa canal system.
Statement II: Canal irrigation is the primary cause of widespread soil salinity in the hilly tracts of Mandla.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

66. The Bansagar Dam is an interstate multipurpose river valley project. Which states share the costs and benefits of this project in a 2:1:1 ratio?
(A) Madhya Pradesh, Uttar Pradesh, and Bihar
(B) Madhya Pradesh, Rajasthan, and Gujarat
(C) Madhya Pradesh, Maharashtra, and Gujarat
(D) Madhya Pradesh, Chhattisgarh, and Jharkhand

NODIA

67. Consider the following statements regarding river basins in Madhya Pradesh:
Statement I: The Narmada River basin is the largest independent river basin entirely located within Madhya Pradesh.
Statement II: The Ganga river basin spans the northern parts of the state through tributaries like Chambal, Son, and Betwa.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

68. Which of the following is not a true reflection of tubewell irrigation spread in Madhya Pradesh?
(A) It has expanded rapidly due to rural electrification.
(B) Its continuous expansion is completely sustainable and has no impact on groundwater tables.
(C) It is highly concentrated in districts like Indore, Ujjain, and Mandsaur.
(D) State-sponsored schemes like 'Krishak Jeevan Jyoti Yojana' have subsidized power for tubewell pumps.

69. Consider the following statements regarding the Omkareshwar Project:

(A) Panna
(B) Umaria
(C) Datia
(D) Khargone

53. Which of the following statements is incorrect regarding Opium cultivation in Madhya Pradesh?
(A) It is heavily regulated by the Central Bureau of Narcotics.
(B) Mandsaur and Neemuch are the principal districts for its cultivation.
(C) It can be freely cultivated by any farmer holding agricultural land in the state.
(D) An alkaloid factory is located in Neemuch to process the produce.

54. Which of the following statements is incorrect regarding agricultural productivity in Madhya Pradesh?
(A) The state has received the Krishi Karman Award multiple times for high food grain production.
(B) Small and fragmented landholdings contribute to lower productivity in several districts.
(C) There is no gap between actual farmers' yield and potential demonstration yield.
(D) Dependence on rainfed agriculture heavily influences annual variation in productivity.

55. Which specific topography is targeted for reclamation in the districts of Morena, Bhind, and Sheopur to increase cultivable land?
(A) Deep gully erosions and ravines
(B) Alpine meadows
(C) Coastal mudflats
(D) Glacial moraines

56. Which district of Madhya Pradesh is famously known for the production of coriander (Dhania) on a large scale?
(A) Guna
(B) Hoshangabad
(C) Betul
(D) Sidhi

57. Madhya Pradesh has the largest area under organic farming in India. Which tribal-dominated district was historically declared the first fully organic farming district of the state?
(A) Mandla
(B) Dindori
(C) Jhabua
(D) Barwani

58. Match the following horticulture or cash crops in List-I with their leading producing districts in Madhya Pradesh in List-II:
List I: (Horticulture/Cash Crop)
P. Opium
Q. Banana
R. Orange
S. Mango (Noorjahan variety)
List II: (Leading District)
1. Alirajpur
2. Burhanpur
3. Agar-Malwa / Chhindwara
4. Neemuch
(A) P-4, Q-2, R-3, S-1
(B) P-2, Q-4, R-1, S-3
(C) P-4, Q-3, R-2, S-1
(D) P-1, Q-2, R-3, S-4

59. The introduction of High Yielding Varieties (HYV) during the Green Revolution had the most profound positive impact on the production of which crop in Madhya Pradesh?
(A) Bajra
(B) Jute
(C) Wheat
(D) Tea

60. Consider the following statements regarding the land use pattern in Madhya Pradesh:
Statement I: The net sown area constitutes nearly half of the total geographical area of the state.
Statement II: Madhya Pradesh has a very negligible percentage of forest cover compared to its net sown area.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

Downloaded from www.pdf.tube

land. What is the primary conceptual benefit of this rainwater harvesting method?
(A) It permanently lowers the local water table to prevent any soil salinity from rising.
(B) It completely eliminates the need for any chemical fertilizers during the crop cycle.
(C) It transforms the farm into a wetland suitable for deep-water rice varieties.
(D) It captures runoff for life-saving irrigation and recharges local aquifers.

79. In the context of irrigation projects in Madhya Pradesh, an Assertion (A) and a Reason (R) are provided below.
Assertion (A): The Indira Sagar Project acts as the mother project for downstream dams on the Narmada River.
Reason (R): It has the largest reservoir capacity in India, providing regulated water flow to Omkareshwar, Maheshwar, and Sardar Sarovar dams.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

80. Consider the following statements regarding well and tubewell irrigation in Madhya Pradesh:
I. It is the dominant source of irrigation in the state.
II. The Malwa plateau relies heavily on tubewells for agricultural water supply.
III. Tubewell irrigation has led to waterlogging issues in the deep ravines.
Which of the given combinations is correct?
(A) I and III only
(B) II and III only
(C) I and II only
(D) I, II and III

81. The Bansagar Project derives its significance primarily because it:
(A) It is the only dam in MP built entirely through funding from the World Bank.
(B) Was built before Indian Independence by the erstwhile princely state of Rewa.
(C) It harnesses the Son River to irrigate Rewa, Satna, and Sidhi districts.
(D) Serves as a purely navigational channel linking the Ganga to the Narmada River.

82. The "Groundwater Development Index" or Stage of Groundwater Extraction is defined as:
(A) The ratio of annual groundwater draft to net annual availability as a percentage.
(B) The total annual rainfall divided by the calculated total groundwater recharge.
(C) The specific depth at which water is first struck during deep tube well drilling.
(D) The average number of tube wells per square kilometer of agricultural land area.

83. What is the approximate share of canal irrigation in the total irrigated area of Madhya Pradesh?
(A) It is the highest, accounting for over 70% of the state's total irrigated area.
(B) It is almost negligible, at less than 2% of the overall agricultural landscape.
(C) It is exactly equal to the area covered by tank and pond irrigation systems.
(D) Around 15-20%, ranking second after wells and tube wells.

NODIA

84. Which of the following statements regarding the Bargi Dam (Rani Avanti Bai Sagar) is incorrect?
(A) It is the first completed major dam project situated on the Narmada River.
(B) The project is situated in the Jabalpur district for regional development.
(C) Its canal system only irrigates western districts like Jhabua.
(D) It provides significant irrigation to Jabalpur, Mandla, and Seoni districts.

85. Identify the correct statement regarding micro-irrigation (Sprinkler and Drip) in Madhya Pradesh:
(A) Sprinkler irrigation is highly unsuited for the undulating topography found in the state.
(B) Drip irrigation is primarily used for deep-water paddy cultivation across the state.
(C) The state promotes micro-irrigation under the PMKSY 'Per Drop More Crop' scheme.
(D) Micro-irrigation leads to massive evaporation losses compared to traditional flood irrigation.

86. Identify the incorrect pair regarding reservoirs and their respective locations in Madhya Pradesh:
(A) Kolar Reservoir - Gwalior
(B) Halali Reservoir - Vidisha
(C) Kerwa Dam - Bhopal
(D) Barna Reservoir - Raisen

87. Identify the incorrect statement regarding the Tawa Project:
(A) It is built at the confluence of the Tawa and Denwa rivers.
(B) It provides irrigation primarily to the Bundelkhand region.
(C) It is situated in the Hoshangabad (Narmadapuram) district.
(D) Its construction significantly boosted wheat production in its command area.

88. Match the following major dam projects in List-I with the rivers they are built on in List-II:
List I: (Major Dam Project)
P. Bansagar
Q. Rajghat
R. Bargi
S. Gandhi Sagar
List II: (River)
1. Chambal
2. Narmada
3. Betwa
4. Son
(A) P-4, Q-3, R-2, S-1
(B) P-3, Q-4, R-1, S-2
(C) P-4, Q-2, R-3, S-1
(D) P-1, Q-2, R-3, S-4

89. Identify the incorrect pair concerning the Omkareshwar Project:
(A) Location - Khandwa district
(B) Primary Purpose - Solely for thermal power generation
(C) River - Narmada
(D) Irrigation Command Area mainly includes - Khargone, Khandwa, and Dhar

90. Which of the following districts has the highest proportion of its net irrigated area covered by ponds and tanks?
(A) Balaghat
(B) Indore
(C) Ujjain
(D) Bhind

91. Which irrigation project in Madhya Pradesh is alternatively known as the Sanjay Sarovar Project?
(A) Bargi Project
(B) Upper Wainganga Project
(C) Bawan Thadi Project
(D) Rajghat Project

92. Why is the irrigation demand for Rabi crops substantially higher than for Kharif crops in Madhya Pradesh?
(A) Rabi crops have a genetically higher water transpiration rate than other crops.
(B) The state government mandates irrigation support only for winter season crops.
(C) Kharif crops grow during the monsoon, fulfilling their water needs naturally.
(D) Rabi crops are exclusively cultivated in sandy soils that drain water instantly.

93. The Mahi river project primarily benefits which states?
(A) Madhya Pradesh and Maharashtra
(B) Madhya Pradesh and Chhattisgarh
(C) Madhya Pradesh, Rajasthan, and Gujarat
(D) Madhya Pradesh and Uttar Pradesh

94. Arrange the following crop categories roughly in the descending order of their total cultivated area in Madhya Pradesh:
I. Cereals (Food grains like Wheat, Paddy, Maize)
II. Oilseeds (like Soybean, Mustard)
III. Commercial/Cash Crops (like Cotton, Sugarcane)
IV. Spices and Condiments
(A) I, II, III, IV
(B) II, I, III, IV
(C) I, III, II, IV
(D) II, III, I, IV

95. What is the expected primary effect of implementing water use efficiency reforms (like canal lining and piped distribution) in the irrigation sector of Madhya Pradesh?
(A) The complete drying up of the terminal command areas of the projects.
(B) Reduction in conveyance losses and increase in the overall irrigated area.

Click Here to Buy book on Amazon

(C) A dramatic and sudden increase in waterlogging and soil salinity levels.
(D) The discontinuation of all multi-purpose river valley projects in the state.

96. Which of the following statements is incorrect regarding the impact of the Green Revolution on Madhya Pradesh?
(A) It led to a massive increase in the production of wheat.
(B) It equally benefitted the production and yield of coarse millets and pulses.
(C) It promoted the heavy use of chemical fertilizers and pesticides.
(D) It increased the demand for assured irrigation facilities like tubewells and canals.

97. Identify the incorrect pair of agricultural institutions in Madhya Pradesh:
(A) Jawaharlal Nehru Krishi Vishwa Vidyalaya - Jabalpur
(B) Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya - Gwalior
(C) National Institute of Weed Science - Bhopal
(D) Indian Institute of Soybean Research - Indore

98. Identify the correct statement regarding the Zaid season in Madhya Pradesh:
(A) It bridges the gap between the Rabi harvest and Kharif sowing.
(B) It relies entirely on the retreating monsoon for its moisture requirements.
(C) Wheat is the dominant and most important crop grown during this season.
(D) The season typically spans the months from September to late December.

99. The heavy concentration of sugar mills around the Narsinghpur and Burhanpur regions is a direct effect of:
(A) Historical bans on transporting raw sugarcane outside of the district boundaries.
(B) Favorable climate and irrigation supporting bulky crops that lose weight quickly.
(C) The complete absence of alternative cash crops in these specific central districts.
(D) Imported sugarcane coming directly from seaports to these central state districts.

100. Why are minor irrigation projects considered highly crucial for small and marginal farmers in the hilly and tribal terrains of Madhya Pradesh?
(A) They require massive capital investment which is easily funded by various foreign banks.
(B) They are purely designed to export agricultural water supplies to neighboring states.
(C) They are quick to construct, localized, and cause minimal displacement.
(D) They allow for the complete diversion of perennial rivers, ensuring year-round flooding.

101. Match the following traditional water structures in List-I with their respective regions or features in List-II:
List I: (Traditional Water Structure)
P. Chandela Tanks
Q. Haveli System
R. Stepwells (Bawdis)
S. Stop Dams / Check Dams
List II: (Region/Feature)
1. Bundelkhand region
2. Rainwater impounding in black soils (Mahakoshal/Jabalpur)
3. Widespread in Malwa and Nimar for groundwater access
4. Modern watershed management across hilly streams
(A) P-1, Q-2, R-3, S-4
(B) P-2, Q-1, R-4, S-3
(C) P-1, Q-3, R-2, S-4
(D) P-4, Q-2, R-3, S-1

102. Which of the following features is not associated with the Rajghat Dam?
(A) It supplies hydroelectricity exclusively to the state of Gujarat.
(B) It is situated on the Betwa River flowing through central India.
(C) It is alternatively named as the Rani Laxmibai Rajghat Project.
(D) It is located near Chanderi within the Ashoknagar district limits.

103. Madhya Pradesh frequently ranks first in India in the production of which of the following crop categories?
(A) Jute and Mesta

Downloaded from www.pdf.tube

(B) Pulses and Oilseeds
(C) Tea and Coffee
(D) Coconut and Rubber

104. Consider the following statements regarding Participatory Irrigation Management (PIM) in Madhya Pradesh:
Statement I: PIM involves handing over the management of tertiary irrigation networks to Water User Associations (WUAs) formed by farmers.
Statement II: The primary objective is to ensure equitable water distribution and efficient maintenance of minor canals.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

105. Which of the following is an incorrect category when classifying uncultivated lands in Madhya Pradesh?
(A) Permanent pastures and other grazing lands
(B) Land under miscellaneous tree crops and groves
(C) Net sown permanent urban industrial zones
(D) Culturable wasteland

106. The construction of the Mahi Project significantly resolved agricultural distress in the tribal-dominated belts of:
(A) Mandla and Dindori
(B) Dhar and Jhabua
(C) Shahdol and Anuppur
(D) Panna and Chhatarpur

107. Find the odd one out from the perspective of major non-food, cash crops grown in Madhya Pradesh:
(A) Jowar
(B) Cotton
(C) Opium
(D) Sugarcane

108. According to the standard classification of irrigation projects in India, a minor irrigation project has a Cultivable Command Area (CCA) of:
(A) Less than 2,000 hectares
(B) Between 2,000 and 10,000 hectares
(C) More than 10,000 hectares
(D) More than 20,000 hectares

109. The term 'cropping pattern' in the context of Madhya Pradesh's agriculture refers to:
(A) The specific spatial arrangement of plants in a single row across the field.
(B) The chemical composition of the fertilizers used during the sowing process.
(C) The strict division of land between cash crops and livestock rearing activities.
(D) The proportion of area under various crops in a region at a point in time.

110. Consider the following initiatives and features related to water conservation in Madhya Pradesh:
I. Construction of stop dams and check dams.
II. Promotion of micro-irrigation systems.
III. 'Jal Jeevan Mission' for agricultural flood irrigation.
IV. 'Bhagirath Krishak Abhiyan' to build farm ponds.
V. Mandatory extraction of groundwater for Kharif crops.
Which of the given combinations is strictly incorrect regarding sustainable water conservation policies?
(A) III and V only
(B) I and IV only
(C) II, III and V only
(D) I, II and IV only

NODIA

111. Madhya Pradesh launched its first comprehensive 'Organic Farming Policy' in which year to formalize and promote chemical-free agriculture?
(A) 1991
(B) 2001
(C) 2011
(D) 2021

112. Consider the following statements regarding the Rani Avanti Bai Sagar Project:
Statement I: It is another name for the Bargi Dam project located on the Narmada River.
Statement II: It has significantly increased the

irrigation potential of the Mahakoshal region.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

113. Which of the following is an incorrect statement regarding the support provided to small farmers via irrigation schemes in Madhya Pradesh?
(A) Schemes like 'Kapil Dhara' aim to provide irrigation facilities on the private land of small and marginal farmers.
(B) Minor tanks and check dams play a crucial role in mitigating drought impacts for these farmers.
(C) Small farmers are prohibited from utilizing groundwater resources.
(D) Subsidies are provided for the installation of solar pumps under the PM-KUSUM scheme.

114. Consider the following statements:
Statement I: The Malwa plateau is ideal for the cultivation of commercial crops like soybean and cotton.
Statement II: The region possesses medium to deep black soils with high moisture retention capacity.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

115. Identify the correct pair representing a crop and its highly associated, efficient irrigation method in the water-scarce regions of Madhya Pradesh:
(A) Cotton - Drip Irrigation
(B) Paddy - Sprinkler Irrigation
(C) Wheat - Rainwater Harvesting Tanks solely
(D) Sugarcane - Dryland farming

116. Identify the correct statement regarding the Rajghat Dam Project:
(A) It is built on the Narmada River.
(B) It provides irrigation exclusively to the Malwa plateau.
(C) It is also known as the Sanjay Sarovar Project.
(D) It is an interstate project of Madhya Pradesh and Uttar Pradesh.

117. Which district has traditionally recorded among the highest gross cropped areas and irrigation percentages due to extensive canal networks like those from the Tawa and Barna projects?
(A) Jhabua
(B) Alirajpur
(C) Panna
(D) Hoshangabad (Narmadapuram)

118. Match the following joint irrigation projects in List-I with their partner states in List-II:
List I: (Joint Irrigation Project)
P. Chambal Project
Q. Bawanthadi (Rajiv Sagar)
R. Urmil Project
S. Bansagar Project
List II: (Partner States)
1. MP and UP
2. MP and Maharashtra
3. MP and Rajasthan
4. MP, UP, and Bihar
(A) P-3, Q-2, R-1, S-4
(B) P-4, Q-1, R-2, S-3
(C) P-3, Q-1, R-2, S-4
(D) P-2, Q-3, R-4, S-1

119. In the context of wheat cultivation in Madhya Pradesh, the beneficial light winter rainfall caused by western disturbances is locally known as:
(A) Mawat
(B) Loo
(C) Amra-Varsha
(D) Kal-Baisakhi

120. Which state legislation provides the legal framework for the formation of Water User Associations in Madhya Pradesh?
(A) MP Sinchai Prabandhan Me Krishakon Ki Bhagidari Adhiniyam, 1999
(B) MP Land Revenue Code, 1959
(C) MP Panchayati Raj Adhiniyam, 1993
(D) MP Krishi Upaj Mandi Adhiniyam, 1972

Click Here to Buy book on Amazon

ANSWERS

1. (D) Khargone
In the geographical distribution of crops across Madhya Pradesh, rice cultivation is heavily concentrated in the eastern and south-eastern districts. Regions like Balaghat, Seoni, and Mandla receive higher annual rainfall and possess suitable soil conditions for paddy. Khargone, located in the western Nimar region, is primarily known for cotton and oilseed production instead of major rice farming.

2. (C) It is strictly a Rabi crop across the entirety of the state.
Maize is a versatile cereal crop extensively grown in the tribal regions of Madhya Pradesh, including Chhindwara and Jhabua. While it can be grown in different seasons with irrigation, it is predominantly a Kharif crop sown during the monsoon. The assertion that it is strictly a Rabi crop throughout the state is factually incorrect regarding its general regional spread.

3. (C) It is the longest season and accounts for the state's maximum sown area.
The Zaid season in Madhya Pradesh is a short summer cropping cycle occurring between the Rabi harvest and Kharif sowing. It is characterized by the cultivation of water-rich crops like melons and cucumbers through assured irrigation. Contrary to being the longest season, it is the shortest and accounts for a much smaller sown area compared to the primary seasons.

4. (A) Nimar > Malwa > Bundelkhand > Baghelkhand
Cotton production in Madhya Pradesh follows a specific regional hierarchy based on soil type and climate. The Nimar region, comprising Khargone and Khandwa, is the leader due to its ideal black soil. This is followed by the Malwa plateau. Northern and eastern regions like Bundelkhand and Baghelkhand have significantly lower levels of traditional cotton production due to differing agro-climatic conditions.

5. (B) Lack of international demand for soybean extraction products
Soybean cultivation in Madhya Pradesh faces several environmental and biological hurdles. Farmers often struggle with erratic monsoons, waterlogging, and diseases like the yellow mosaic virus. However, there is no lack of international demand; soybean extraction products, particularly soy meal, are highly sought after globally for animal feed. Market demand remains a strength for the sector rather than a primary challenge.

6. (B) It is a water-intensive cash crop requiring assured irrigation.
Sugarcane is a significant commercial crop in Madhya Pradesh, particularly in districts with good irrigation facilities like Narsinghpur. It is a long-duration crop that requires substantial water throughout its growth cycle, making assured irrigation essential. Unlike short-term food grains, it typically takes nearly a year to mature and is not restricted to specific hilly tracts like the Vindhyan range.

7. (B) It functions as the main source of livelihood for the majority of the rural population.
Agriculture is the backbone of the economy in Madhya Pradesh, primarily because of its role in rural employment. While other sectors contribute to tax revenue or investment, farming remains the primary source of livelihood for the majority of the state's population. The sector supports millions of households through the production of food grains, oilseeds, and various essential commercial crops.

8. (B) Narsinghpur and Chhindwara
Tur, also known as Arhar or pigeon pea, is a vital pulse crop cultivated in several parts of Madhya Pradesh. Narsinghpur and Chhindwara are recognized as leading districts for its production due to favorable soil and climatic conditions. While other pulses are grown across the state, these specific districts show a high concentration of Tur cultivation compared to northern or western tracts.

NODIA

is the most appropriate long-term strategy to ensure agricultural sustainability and income growth in Madhya Pradesh?

(A) Promoting diversification, resilient agriculture, micro-irrigation, and processing.
(B) Expanding water-intensive crops like paddy using deep tubewells in drought areas.
(C) Completely banning all chemical inputs overnight across the entirety of the state.
(D) Shifting the entire rural workforce away from agriculture to urban manufacturing sectors.

www.nodia.in

Downloaded from www.pdf.tube

121. Find the odd one out in the context of major inter-state joint river valley projects involving Madhya Pradesh:
(A) Kolar Project
(B) Bansagar Project
(C) Sardar Sarovar Project
(D) Rajghat Project

122. Consider the following statements regarding the promotion of Drip Irrigation in Madhya Pradesh:
Statement I: High initial capital cost is a major barrier for small farmers adopting drip irrigation.
Statement II: The government provides heavy subsidies to farmers under micro-irrigation schemes to overcome this cost barrier.
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

123. Which of the following institutions is located in Bhopal?
(A) Indian Institute of Soybean Research
(B) State Institute of Agriculture Extension and Training (SIAET)
(C) Madhya Pradesh Wheat Research Centre
(D) National Research Centre for Grapes

124. The "Cultivable Command Area" (CCA) of an irrigation project in Madhya Pradesh is best defined as:
(A) The total geographical area of the entire river basin system.
(B) The area which can be irrigated and is fit for cultivation.
(C) The total area submerged by the reservoir behind the main dam.
(D) The total area under forest cover within the designated project zone.

125. Identify the correct statement regarding Command Area Development (CAD) programs in Madhya Pradesh:
(A) CAD programs solely focus on the construction of massive hydroelectric dams.
(B) They are programs exclusively funded by private corporate industrial entities.
(C) To bridge the gap between irrigation potential created and that utilized.
(D) They involve shifting populations from irrigated areas to non-irrigated areas.

126. If a district relies almost entirely on tubewell irrigation without surface water recharge systems, which phenomenon is most likely to occur over a decade?
(A) Continuous decline of the static groundwater table
(B) Rejuvenation of local perennial rivers
(C) Formation of artesian wells naturally erupting water
(D) Improvement of soil organic carbon

NODIA

127. The proposed Ken-Betwa River Interlinking Project aims to transfer surplus water primarily to benefit the drought-prone districts of which region in Madhya Pradesh?
(A) Nimar
(B) Bundelkhand
(C) Malwa
(D) Baghelkhand

128. Which of the following is a negative statement concerning the Rajghat Dam?
(A) It is situated on the Betwa river.
(B) It benefits districts like Guna, Ashoknagar, and Shivpuri in MP.
(C) It provides water for both irrigation and power generation.
(D) It is entirely located within the geographical boundary of Rajasthan.

129. The concrete lining of main canals and distributaries in projects like Bansagar and Bargi is primarily done to cause which of the following effects?
(A) To prevent the natural and uncontrolled breeding of fish within the canals.
(B) To significantly reduce water loss due to deep percolation and seepage.
(C) To increase the aesthetic tourism value of the canals for local residents.
(D) To allow heavy navigation vessels to travel smoothly across the state.

130. Considering the yield gaps and the limits of traditional farming, which of the following

9. (B) Its deep root system allows for the utilization of sub-soil moisture.
Jowar is a hardy millet well-suited for the semi-arid conditions of the northern Gird tract, including Bhind and Morena. Its physiological adaptation includes a deep and efficient root system that enables the plant to access moisture from deeper soil layers. This characteristic makes it highly resilient during dry spells, providing a reliable food and fodder source for local farming communities.

10. (C) Low rainfall and the absence of extensive wetland irrigation infrastructure.
The productivity of rice in the northern districts of Madhya Pradesh is generally lower than in the eastern regions. The eastern districts benefit from higher natural rainfall and specialized wetland ecosystems that favor paddy. In contrast, the northern regions experience lower precipitation and lack the extensive irrigation infrastructure necessary to achieve high yields for such a water-demanding crop as rice.

11. (B) I, III and IV only
Madhya Pradesh is a national leader in oilseed production, driven largely by the dominance of soybean across the Malwa plateau. Groundnut cultivation is concentrated in the western Nimar and Malwa regions. However, mustard is primarily a crop of the northern Gird region, specifically in districts like Morena and Bhind, rather than central districts like Bhopal and the surrounding Raisen area.

12. (C) Mustard - Kharif
Crops in Madhya Pradesh are classified into seasons based on their sowing and harvesting periods. Wheat and mustard are classic Rabi crops, sown in winter and harvested in spring. Soybean and maize are primary Kharif crops, while moong is often grown in the summer Zaid season. Therefore, pairing mustard with the Kharif season is incorrect as it requires cooler temperatures.

13. (A) Both Statement I and Statement II are correct.
Moong is a valuable pulse crop that serves multiple roles in the agricultural system of Madhya Pradesh. It is frequently grown as a short-duration catch crop during the summer Zaid season where irrigation is available. Beyond its economic value, moong naturally enhances soil health by fixing atmospheric nitrogen through its root nodules, benefiting subsequent crops in the yearly rotation cycle.

14. (C) Malwa Plateau
The Malwa Plateau is the primary heartland for soybean cultivation in Madhya Pradesh, earning the state the title of the Soy State of India. This region provides the ideal combination of medium-to-deep black soils and moderate rainfall required for the crop. Extensive cultivation in districts like Ujjain, Dewas, and Indore makes Malwa the most significant agricultural region for this oilseed.

15. (D) Ratlam (Jaora)
The industrial processing of agricultural products in Madhya Pradesh began with the establishment of sugar mills. The first sugar mill in the state was set up in 1934 at Jaora, which is located in the Ratlam district. This historical milestone marked the beginning of organized large-scale sugarcane processing, taking advantage of the local availability of raw materials in the surrounding regions.

16. (A) Sown in June-July and harvested in September-October
The Kharif season in Madhya Pradesh is closely aligned with the arrival of the southwest monsoon. Farmers typically begin sowing crops like soybean, rice, and maize in June or July once the rains start. These crops grow through the rainy months and are harvested in September or October. This cycle is fundamental to the state's food security and overall agricultural output.

17. (A) It is primarily cultivated as a Rabi season crop.
Cotton is a major commercial crop in Madhya Pradesh, but it is primarily grown during the Kharif season, not the Rabi season. It thrives in the deep black soils of the Nimar and Malwa regions, where it is known as white gold. Both traditional and genetically modified Bt varieties are used, benefiting from the moisture provided by the summer monsoon rains.

18. (A) Both Statement I and Statement II are correct.
Rice cultivation in Madhya Pradesh is concentrated in the eastern and south-eastern districts because of the favorable climatic

Click Here to Buy book on Amazon

conditions found there. These regions receive significantly higher annual rainfall compared to the drier western parts of the state. The combination of abundant water and suitable soil types makes the eastern belt the most productive zone for paddy cultivation in the state.

19. (A) Both A and R are true and R is the correct explanation of A.
Jowar and Bajra are traditional millets widely grown in the western and north-western districts of Madhya Pradesh. These areas are characterized by lower rainfall and are more prone to drought compared to other regions. Because these hardy crops require less water and can withstand higher temperatures, they are perfectly suited to the environmental conditions of the state's drier agricultural zones.

20. (A) I and II only
Gram is the most significant Rabi pulse crop in Madhya Pradesh, with major production coming from districts like Vidisha and Ashoknagar. It grows best in cool, dry climates with moderate moisture. The claim that it requires highly humid conditions is incorrect, as excessive humidity can lead to pest infestations and diseases that adversely affect the growth and yield of the crop.

21. (C) Grapes - Ratlam
Crop specialization in Madhya Pradesh is often tied to specific districts with unique climatic or historical advantages. Ratlam is well-known for its high-quality grape production and associated research facilities. Other crops like sugarcane are more associated with Narsinghpur, cotton with the Nimar region, and opium with Mandsaur and Neemuch. Thus, the pair linking grapes to Ratlam is the correct regional association.

22. (B) Mild winter temperatures and moisture retention in deep black soil.
Wheat cultivation on the Malwa plateau is highly successful due to the region's specific environmental advantages. The mild winter temperatures provide an ideal growing environment for the crop. Furthermore, the deep black soils found in this area have an excellent capacity for retaining moisture from the preceding monsoon, which supports the healthy development of the grain during the drier winter months.

23. (D) Chinnor
Chinnor rice is a premium variety grown in the Balaghat district of Madhya Pradesh, known for its distinct aroma and taste. It received the prestigious Geographical Indication tag, recognizing its unique qualities and traditional links to the specific geographical region. This certification helps protect the traditional knowledge of local farmers and promotes the variety in national and international agricultural markets.

24. (D) Kodo-Kutki
Cotton, sugarcane, and opium are classified as major commercial or cash crops in Madhya Pradesh because they are primarily grown for sale and industrial processing. In contrast, Kodo and Kutki are small millets traditionally grown by tribal communities for self-consumption as food grains. While they are gaining market value as health foods, they are historically categorized as food crops rather than industrial commercial crops.

25. (B) The ratio of gross cropped area to the net sown area, multiplied by 100.
Cropping intensity is a key indicator of how intensively agricultural land is used during a year. It is calculated by taking the gross cropped area, which includes land sown more than once, and dividing it by the net sown area, then multiplying by one hundred. Higher intensity usually indicates better irrigation facilities and more frequent use of the land across multiple seasons.

26. (D) Sehore
Sehore is traditionally celebrated as one of the most prominent districts for the production of high-quality Sharbati wheat. This premium variety is known for its golden texture, sweet taste, and superior bread-making qualities. The district's climate and soil conditions are particularly well-suited for this variety, making it a major hub for the production and trade of premium wheat in India.

27. (A) Deep alluvial soils combined with extensive canal irrigation networks.
The Narsinghpur district has emerged as a major hub for sugarcane production due to its favorable natural and man-made resources. The

NODIA

presence of deep, fertile alluvial soils provides the necessary nutrients for this heavy-feeding crop. Additionally, extensive canal irrigation from projects like the Bargi Dam ensures the consistent water supply required for sugarcane to reach maturity and produce high sugar content.

28. (A) P-4, Q-1, R-3, S-2
Crop distribution in Madhya Pradesh is highly regionalized. Soybean is most extensively grown in the Malwa region, with Ujjain being a major center. Rice production is concentrated in the eastern district of Balaghat. Sugarcane is the primary commercial crop in Narsinghpur, while opium cultivation is strictly regulated and concentrated in the western districts of Mandsaur and nearby Neemuch.

29. (C) Gird Region (Chambal division)
Bajra is a hardy, drought-resistant millet that thrives in semi-arid conditions with low rainfall and sandy soils. In Madhya Pradesh, these environmental conditions are most prominent in the Gird region, which encompasses the Chambal division. Districts like Morena, Bhind, and Sheopur are the traditional centers for Bajra cultivation, providing a reliable food source in the state's drier northern belt.

30. (D) The state holds the first rank in overall pulses production in India.
Madhya Pradesh is a powerhouse in the production of pulses, consistently ranking as the leading state in India. It produces a wide variety of pulses, including Gram, Tur, Moong, and Urad. While Tur is a Kharif crop and Gram is a Rabi crop, their collective output across the state's diverse agro-climatic zones secures its top national position in this category.

31. (A) First in Garlic and top three in Onion
Madhya Pradesh has made significant strides in the horticulture sector, becoming a major producer of bulb vegetables. The state currently holds the top rank in the national production of garlic, with heavy concentrations in the western districts. It also ranks among the top three states for onion production, demonstrating its significant contribution to the country's overall horticultural output and food supply.

32. (B) Ravine and Gully eroded lands - Chambal Basin
The Chambal Basin is notorious for severe land degradation caused by gully erosion, resulting in extensive ravines. These wastelands are a result of the soft alluvial soil being washed away by the Chambal River and its tributaries over centuries. This unique topography creates vast areas of unproductive land that require specialized reclamation efforts to be brought back into any form of agricultural use.

33. (C) Statement I is correct, but Statement II is incorrect.
Sunflower is a unique oilseed crop because it is photo-insensitive, meaning it can be grown during the Kharif, Rabi, or Zaid seasons regardless of day length. However, it requires well-drained soil for optimal seed production and healthy growth. The suggestion that it needs water-logged or marshy lands is incorrect, as such conditions would lead to root rot and poor crop performance.

34. (B) I, IV, II, III
Wheat production in Madhya Pradesh is highest in districts with extensive irrigation and fertile soil. Hoshangabad, now Narmadapuram, consistently ranks first due to the Tawa irrigation project. It is followed by Vidisha and Sehore, which are part of the core wheat-producing Malwa belt. Alirajpur, located in the hilly western tribal region with less irrigation, typically has much lower wheat production levels.

35. (A) Neemuch
The Government Opium and Alkaloid Works, a significant facility for processing raw opium into medicinal alkaloids, is located in Neemuch. This facility is under the control of the Central Bureau of Narcotics and handles the specialized processing of the opium crop grown in the surrounding districts. Its location is strategic, being in the heart of the state's legal opium-producing region.

NODIA

36. (A) Rich in surface water as it is the origin of several major river systems.
Madhya Pradesh is often called the mother of rivers because it serves as the origin for several major river systems, including the Narmada, Tapti, Mahi, and Son. This makes the state naturally rich in surface water resources. These

54. (C) There is no gap between actual farmers' yield and potential demonstration yield.
Agricultural productivity in Madhya Pradesh is influenced by several factors, including landholding size and dependence on rainfall. While the state has excelled in food grain production, a significant yield gap remains between what is achieved in demonstration plots and what farmers actually produce. Closing this gap is essential for increasing the state's total output and improving the economic status of rural households.

55. (A) Deep gully erosions and ravines
In the northern districts of Morena, Bhind, and Sheopur, the primary target for land reclamation is the extensive network of ravines and gully erosions. These wastelands, created by the action of the Chambal River system, have rendered large tracts of land uncultivable. Reclamation efforts focus on leveling this rugged topography and stabilizing the soil to expand the area available for productive agriculture.

56. (A) Guna
Guna is widely recognized as a major center for coriander production in Madhya Pradesh. The district's climate and soil are highly conducive to the growth of this spice, which is a key component of the local agricultural economy. Guna's coriander is known for its quality and is traded in large quantities, making the district a significant contributor to the state's spice output.

57. (A) Mandla
Mandla was historically declared the first fully organic farming district in Madhya Pradesh. This tribal-dominated district was chosen to lead the state's transition toward chemical-free agriculture, leveraging traditional farming practices that were already largely organic. This initiative aimed to preserve soil health, protect the local environment, and provide farmers with better market opportunities for their naturally grown agricultural produce and food products.

58. (A) P-4, Q-2, R-3, S-1
Horticultural production in Madhya Pradesh is concentrated in specific districts based on regional strengths. Neemuch is a primary center for opium, while Burhanpur is the state's leading banana producer. The Agar-Malwa and Chhindwara regions are known for orange cultivation. Additionally, the rare and famous Noorjahan mango variety is exclusively grown in the Alirajpur district, highlighting the state's diverse horticultural landscape.

59. (C) Wheat
The introduction of High Yielding Varieties during the Green Revolution had its most significant impact on wheat production in Madhya Pradesh. These new seeds, combined with better irrigation and chemical fertilizers, led to a dramatic increase in both yield and total output. This transformation established wheat as the most important food grain crop in the state, particularly across the fertile Malwa plateau.

60. (C) Statement I is correct, but Statement II is incorrect.
In Madhya Pradesh, the net sown area accounts for approximately half of the total geographical area, reflecting the state's agricultural focus. However, the state also possesses the largest forest cover area in India. Therefore, the claim that the state has a negligible percentage of forest cover compared to its net sown area is incorrect, as both are major land-use categories.

61. (C) The state has uniform groundwater availability across all its districts.
Groundwater availability in Madhya Pradesh is highly varied and influenced by the underlying geological structures. Hard rock terrains in many regions limit aquifer storage and recharge capacities. Consequently, groundwater levels and availability are not uniform, with some western districts experiencing over-extraction while other areas have different hydrogeological profiles. Government initiatives often focus on managing these localized differences through artificial recharge.

62. (A) Punasa, Khandwa
The Indira Sagar Project, a massive multipurpose project on the Narmada River, is located at Punasa in the Khandwa district. It features the largest reservoir in India by volume, providing crucial water for irrigation and power generation. Its strategic location and immense storage capacity make it the mother project for several other dams built further downstream on the Narmada River system.

Downloaded from www.pdf.tube

of vermicompost, crop rotation with legumes to improve soil nitrogen, and the avoidance of chemical fertilizers. The intensive application of Endosulfan, a potent chemical pesticide, is contrary to the principles of organic agriculture and is actively discouraged in these farming systems.

46. (B) Kharif crop
Groundnut is a significant oilseed crop in Madhya Pradesh, primarily cultivated during the Kharif season. It is sown with the arrival of the monsoon in June or July and harvested in the autumn. The crop thrives in the well-drained soils of the western regions, particularly in the Nimar and Malwa plains, where the rainfall pattern supports its growth and pod development.

47. (A) Both Statement I and Statement II are correct.
The yield gap represents the difference between the maximum possible yield achieved under ideal conditions and the actual yield realized by farmers. In Madhya Pradesh, this gap is often wide due to various constraints. Factors such as inadequate access to quality seeds, lack of timely irrigation, and insufficient technical knowledge contribute significantly to the lower-than-potential productivity observed in many agricultural districts.

48. (B) Favorable climatic conditions and the presence of fertile black soils.
The heavy concentration of garlic production in Mandsaur and Ratlam is primarily due to the ideal natural environment of the Malwa plateau. These districts possess fertile black soils that retain moisture and provide necessary nutrients. Additionally, the mild winter climate in these western districts is perfectly suited for the growth of high-quality garlic, making the region a national hub for this crop.

49. (A) Promoting intensive monoculture of water-demanding crops like paddy.
Reclaiming the ravines of the Chambal region involves stabilizing the soil and leveling the uneven terrain. Effective methods include building peripheral bunds, afforestation, and using heavy machinery for land leveling. Promoting the monoculture of water-intensive crops like paddy is not a suitable reclamation strategy, as it could exacerbate soil erosion and is impractical in the semi-arid, rugged topography of the ravines.

50. (B) IV only
Land classification in Madhya Pradesh distinguishes between various types of fallow and wastelands. Fallow lands are temporarily uncultivated to restore fertility. Current fallow specifically refers to land left uncultivated for one year or less. The statement that current fallow is land left for more than five years is incorrect, as such land is generally classified as culturable wasteland or old fallow land.

NODIA

51. (D) Rivers exhibit high seasonal variability, drying up during the summer months.
Surface water utilization in Madhya Pradesh is limited by the seasonal nature of its rivers. Most rivers in the state are rainfed and experience a significant reduction in flow during the post-monsoon and summer months. This high seasonal variability makes it difficult to maintain consistent water supplies for irrigation and other needs throughout the year without the support of large reservoirs and dams.

52. (D) Khargone
Khargone is the leading district for chilly production in Madhya Pradesh, making it the most appropriate location for a commercial processing unit. The district is famous for its high-quality red chillies, which are traded extensively. Proximity to this massive raw material source would reduce transportation costs and ensure a steady supply for any industrial processing and value-addition activities in the sector.

53. (C) It can be freely cultivated by any farmer holding agricultural land in the state.
Opium cultivation in Madhya Pradesh is strictly controlled and regulated by the Central Bureau of Narcotics due to its medicinal and narcotic properties. It is not open to all farmers; instead, specific licenses are issued only to eligible farmers in designated districts like Mandsaur and Neemuch. This rigorous oversight ensures that the production of raw opium is monitored from sowing to final processing.

and hydroelectric power to both states, playing a crucial role in the agricultural development of the northern Gird region.

72. (B) Bhoj Wetland (Upper Lake)
The Bhoj Wetland, comprising the Upper and Lower Lakes in Bhopal, was recognized as a Ramsar site of international importance in 2002. This recognition highlights its ecological significance as a habitat for diverse flora and fauna, including migratory birds. It was the first site in Madhya Pradesh to receive this status, though other lakes like Sirpur and Sankhya Sagar have been added later.

73. (B) Tawa Project - Indira Sagar
Many irrigation projects in Madhya Pradesh are named after historical figures. The Bargi Project is known as Rani Avanti Bai Sagar, and the Rajghat Project is named after Rani Laxmibai. However, the Tawa Project is distinct and is not known as Indira Sagar. The name Indira Sagar specifically refers to the massive dam project located at Punasa on the Narmada River.

74. (C) Crystalline rock and undulating topography provide natural depressions for storage.
Tank irrigation is historically prominent in eastern Madhya Pradesh because of the region's geography. The presence of hard crystalline rock prevents water from seeping away easily, and the undulating topography creates natural depressions that are ideal for collecting and storing rainwater. These factors made tanks a reliable and traditional source of irrigation in districts like Balaghat and Seoni for many generations.

75. (D) Tawa Project
The agricultural landscape of the Hoshangabad district was transformed by the Tawa Project. Before the dam's completion, the area relied largely on single-crop rainfed farming. The availability of reliable canal water enabled farmers to shift to intensive double-cropping, particularly with wheat and soybean. This increased the cropping intensity and significantly boosted the overall economic prosperity of the farmers in the project's command area.

76. (D) Ganga Basin
The Son River originates in the Amarkantak plateau of Madhya Pradesh and flows northwards through the state. It is a major right-bank tributary of the Ganges, eventually joining it in Bihar. Consequently, the entire catchment area of the Son River is part of the larger Ganga Basin system, which drains the northern and eastern parts of Madhya Pradesh through several important rivers.

77. (D) Katni and Rewa
The Bargi diversion project is a major irrigation initiative that carries water from the Bargi Dam on the Narmada River to other regions. Its canal network is designed to provide irrigation to drought-prone areas in the eastern part of the state. Specifically, the diversion helps supply water to districts like Katni and Rewa, supporting agricultural activities where local water resources are often insufficient.

78. (D) It captures runoff for life-saving irrigation and recharges local aquifers.
Small-scale water harvesting structures like farm ponds provide critical benefits in water-scarce regions. By capturing surface runoff during the monsoon, these ponds provide a source of life-saving irrigation during dry spells. Additionally, the stored water slowly seeps into the ground, helping to recharge local groundwater aquifers and improving the overall water security for the individual farmer and the surrounding community.

79. (A) Both A and R are true and R is the correct explanation of A.
The Indira Sagar Project is considered the mother project for the Narmada River because of its massive storage capacity. It regulates the flow of water to multiple downstream dams, including Omkareshwar and Sardar Sarovar. This regulation ensures a consistent water supply for power generation and irrigation throughout the year, making it the most critical structural component in the entire river valley development.

80. (C) I and II only
Wells and tubewells are the primary source of irrigation in Madhya Pradesh, covering more area than canals or tanks. The Malwa plateau, in particular, relies heavily on groundwater to

Click Here to Buy book on Amazon

63. (A) Tawa Reservoir is situated in the Hoshangabad (Narmadapuram) district.
Madhya Pradesh features several important reservoirs used for irrigation and power. The Tawa Reservoir, located in Narmadapuram, is one of the most critical, supporting a large command area. While Bhojtal in Bhopal is a significant historic water body, most major reservoirs in the state are artificial structures created by dams on rivers like the Narmada, Betwa, and Chambal for various purposes.

64. (A) Bargi Dam → Indira Sagar Dam → Omkareshwar Dam → Maheshwar Dam
The Narmada River is home to several major dams arranged in a sequence from east to west. The Bargi Dam is located upstream near Jabalpur. Moving downstream toward the west, it is followed by the Indira Sagar Dam at Punasa, the Omkareshwar Dam, and finally the Maheshwar Dam. This cascading system of reservoirs allows for the regulated and efficient use of water resources.

65. (C) Statement I is correct, but Statement II is incorrect.
The Tawa canal system provides extensive irrigation benefits to the Hoshangabad and Harda districts, significantly boosting their agricultural productivity. However, the claim that canal irrigation is causing widespread soil salinity in the hilly tracts of Mandla is incorrect. Soil salinity issues are more commonly associated with over-irrigation in flat alluvial plains rather than the rugged, hilly topography found in Mandla.

66. (A) Madhya Pradesh, Uttar Pradesh, and Bihar
The Bansagar Dam is a significant interstate project built on the Son River. It is a joint venture between Madhya Pradesh, Uttar Pradesh, and Bihar. The costs and the benefits of the project, including water for irrigation and power, are shared among these three states according to a pre-determined ratio, reflecting its importance for the development of the entire region.

67. (D) Statement I is incorrect, but Statement II is correct.
The Narmada River basin is significant for Madhya Pradesh, but it is shared with other states like Gujarat. In contrast, the Ganga river basin is the largest drainage system in India, and its catchment extends into northern Madhya Pradesh through major tributaries like the Chambal and Betwa. Therefore, while the Narmada is a vital internal waterway, the Ganga basin covers a larger northern area.

68. (B) Its continuous expansion is completely sustainable and has no impact on groundwater tables.
Tubewell irrigation has expanded rapidly in Madhya Pradesh, supported by rural electrification and government subsidies. However, this growth is not entirely sustainable in many regions. Continuous and unregulated extraction of groundwater has led to a significant decline in water tables, particularly in the Malwa plateau. This depletion poses a long-term threat to agricultural stability and requires careful management of groundwater resources.

69. (A) Both Statement I and Statement II are correct.
The Omkareshwar Project is a key component of the Narmada Valley development, featuring a concrete gravity dam. It is located downstream from the larger Indira Sagar Project and utilizes regulated water releases for both power and irrigation. Its canal system provides essential water to the Nimar and Malwa regions, supporting the cultivation of various crops in these historically water-scarce agricultural zones.

70. (C) The state government entirely bans the construction of small check dams on seasonal streams.
Water conservation is a priority in Madhya Pradesh, with policies promoting rooftop harvesting and the restoration of traditional stepwells. Campaigns like Jalabhishekam encourage the building of conservation structures. Far from banning them, the government actively promotes the construction of small check dams and stop dams on seasonal streams to slow down runoff and improve the recharge of local groundwater aquifers.

71. (A) I, II and IV only
The Chambal Valley Project is a collaborative effort between Madhya Pradesh and Rajasthan to harness the Chambal River. It includes the Gandhi Sagar Dam in Madhya Pradesh, as well as the Rana Pratap Sagar and Jawahar Sagar dams in Rajasthan. This project provides irrigation

NODIA

the Narmada River in the Khandwa district. It provides irrigation to large areas in the Nimar and Malwa regions and generates hydroelectric power. The claim that its primary purpose is solely for thermal power generation is incorrect, as it does not involve coal-based electricity production and focuses on renewable hydel energy.

90. (A) Balaghat
Balaghat district has the highest proportion of its irrigated area covered by ponds and tanks. This is due to the district's unique topography and the presence of hard rock, which makes tank storage more practical and traditional than in other parts of the state. These water bodies are essential for supporting the intensive rice cultivation for which the Balaghat region is famous.

91. (B) Upper Wainganga Project
The Upper Wainganga Project is also known as the Sanjay Sarovar Project. It is a significant irrigation project located in the Seoni and Balaghat districts of Madhya Pradesh. By harnessing the Wainganga River, it provides crucial water resources for paddy cultivation in the south-eastern part of the state, contributing to the agricultural productivity of the tribal-dominated regions in that area.

92. (C) Kharif crops grow during the monsoon, fulfilling their water needs naturally.
The demand for irrigation is much higher during the Rabi season because these crops grow during the dry winter months. In contrast, Kharif crops are sown and grown during the monsoon season, when abundant rainfall naturally fulfills most of their water requirements. Therefore, the reliance on artificial irrigation systems like canals and tubewells is significantly greater for winter crops like wheat and mustard.

93. (C) Madhya Pradesh, Rajasthan, and Gujarat
The Mahi River project is a collaborative water resource development initiative that benefits multiple states. It serves the agricultural and domestic water needs of Madhya Pradesh, Rajasthan, and Gujarat. The river originates in Madhya Pradesh and flows through these states, making its management a key part of the interstate cooperation for regional development and drought mitigation in the western part of India.

94. (A) I, II, III, IV
The cropping pattern of Madhya Pradesh is dominated by food grains, with cereals like wheat and maize occupying the largest area. This is followed by oilseeds, particularly soybean and mustard. Commercial crops like cotton and sugarcane occupy a significant but smaller portion of the total land. Spices and condiments, while economically important, account for the smallest share among these major agricultural crop categories.

95. (B) Reduction in conveyance losses and increase in the overall irrigated area.
Improving water use efficiency through canal lining and piped distribution systems aims to modernize the state's irrigation infrastructure. These reforms significantly reduce the amount of water lost to seepage and evaporation as it travels from the reservoir to the fields. By minimizing these conveyance losses, more water becomes available at the tail-end of the canal system, allowing for an increase in the total irrigated area.

96. (B) It equally benefitted the production and yield of coarse millets and pulses.
The Green Revolution in Madhya Pradesh brought about a massive increase in wheat production through the use of high-yielding seeds and better irrigation. However, its benefits were not distributed equally across all crops. Coarse millets and pulses did not see the same level of technological advancement or productivity gains as wheat and rice, leading to a shift in the state's overall cropping pattern.

97. (C) National Institute of Weed Science - Bhopal
Madhya Pradesh is home to several prestigious agricultural institutions. Jawaharlal Nehru Krishi Vishwa Vidyalaya is in Jabalpur, and the Indian Institute of Soybean Research is in Indore. While many agricultural offices are in Bhopal, the National Institute of Weed Science is actually located in Jabalpur. This institute conducts important research on managing weeds to improve crop productivity and sustainability across the country.

98. (A) It bridges the gap between the Rabi harvest and Kharif sowing.
The Zaid season is a short agricultural period that occurs during the summer months in Madhya

Downloaded from www.pdf.tube

support its intensive agricultural activities. While tubewell irrigation has expanded significantly, it is not traditionally associated with waterlogging issues in the ravines, which are more related to surface water erosion and river action.

81. (C) It harnesses the Son River to irrigate Rewa, Satna, and Sidhi districts.
The Bansagar Project is a vital interstate multipurpose dam located on the Son River. Its primary significance for Madhya Pradesh lies in providing irrigation to the historically water-scarce districts of the Baghelkhand region, including Rewa, Satna, and Sidhi. By harnessing the flow of the Son, the project has enabled a significant increase in agricultural productivity and provided a stable water source for the region.

82. (A) The ratio of annual groundwater draft to net annual availability as a percentage.
The Groundwater Development Index is a critical measure used to assess the sustainability of water use. It is calculated by taking the total annual amount of groundwater extracted for all purposes and dividing it by the net annual groundwater available through recharge. This percentage helps identify areas where over-extraction is occurring, guiding policies for conservation and the regulation of tubewell drilling.

83. (D) Around 15-20%, ranking second after wells and tube wells.
In the overall irrigation profile of Madhya Pradesh, canal irrigation plays a significant but secondary role compared to groundwater. While wells and tubewells cover the largest percentage of irrigated land, canals account for approximately fifteen to twenty percent. These canal systems are primarily associated with large-scale projects on rivers like the Narmada, Tawa, and Chambal, serving specific command areas across the state.

84. (C) Its canal system only irrigates western districts like Jhabua.
The Bargi Dam is the first major project completed on the Narmada River and is located near Jabalpur. It provides essential irrigation and power benefits to the surrounding Mahakoshal region, including districts like Jabalpur, Mandla, and Seoni. The claim that its canal system only irrigates western districts like Jhabua is incorrect, as those districts are geographically distant and served by different projects.

85. (C) The state promotes micro-irrigation under the PMKSY 'Per Drop More Crop' scheme.
Micro-irrigation technologies like drip and sprinkler systems are being actively promoted in Madhya Pradesh to improve water use efficiency. Under the national Pradhan Mantri Krishi Sinchayee Yojana, the state provides support to farmers for adopting these methods. These systems are particularly beneficial in water-scarce areas as they reduce evaporation and seepage losses compared to traditional flood irrigation, ensuring better crop yields.

NODIA

86. (A) Kolar Reservoir - Gwalior
Several reservoirs provide water for cities and agriculture in Madhya Pradesh. The Halali Reservoir is located near Vidisha, and the Barna Reservoir is in Raisen. The Kolar Dam, however, is situated in the Sehore district and is a primary source of drinking water for the city of Bhopal. Therefore, pairing the Kolar Reservoir with Gwalior is an incorrect geographical association within the state.

87. (B) It provides irrigation primarily to the Bundelkhand region.
The Tawa Project is built at the confluence of the Tawa and Denwa rivers in the Narmadapuram district. It is a major source of irrigation for the local fertile plains, significantly boosting wheat and soybean production. However, it does not serve the Bundelkhand region, which is located in the northern part of the state and is served by different river systems like the Betwa.

88. (A) P-4, Q-3, R-2, S-1
Major dam projects in Madhya Pradesh are built on different river systems. The Bansagar Dam is on the Son River, while the Rajghat Dam is on the Betwa River. The Bargi Dam is an important project on the Narmada River, and the Gandhi Sagar Dam is part of the Chambal Valley Project. These dams are the foundations of the state's irrigation and power infrastructure.

89. (B) Primary Purpose - Solely for thermal power generation
The Omkareshwar Project is a multipurpose hydroelectric and irrigation project located on

classified as non-food cash crops because they are primarily grown for industrial sale. Jowar, on the other hand, is a food grain millet traditionally grown for human consumption and animal fodder. While it has market value, it remains a food crop rather than a primary industrial commercial crop.

108. (A) Less than 2,000 hectares
Irrigation projects in India are classified based on their Cultivable Command Area. A minor irrigation project is defined as one that serves an area of less than 2,000 hectares. These projects typically include small tanks, tubewells, and lift irrigation schemes. Because they are localized and relatively simple to implement, they play a crucial role in providing irrigation to small-scale farmers in diverse topographical regions.

109. (D) The proportion of area under various crops in a region at a point in time.
The cropping pattern is a fundamental concept in agriculture that describes how farmers allocate their land to different crops. In Madhya Pradesh, this pattern is influenced by factors like soil type, rainfall, and irrigation availability. It represents the relative share of each crop in the total cultivated area of a region, reflecting the agricultural choices and priorities of the farming community.

110. (A) III and V only
Sustainable water management policies focus on conservation and efficient usage rather than wasteful practices. The Jal Jeevan Mission is a central initiative aimed specifically at providing functional household tap connections for drinking water, not for agricultural flood irrigation. Furthermore, mandatory extraction of groundwater is counterproductive to conservation goals, as it exacerbates the depletion of critical aquifers in vulnerable agricultural regions.

111. (C) 2011
Madhya Pradesh took a major step toward promoting sustainable agriculture by launching its first comprehensive Organic Farming Policy in 2011. This policy aimed to formalize the state's commitment to chemical-free farming, focusing on improving soil health and providing better market access for organic produce. Since then, the state has emerged as a national leader in the total area under certified organic cultivation.

112. (A) Both Statement I and Statement II are correct.
The Rani Avanti Bai Sagar Project is the official name for the Bargi Dam, which is located on the Narmada River. It is a vital multipurpose project that provides irrigation, power, and drinking water. Its successful completion has significantly increased the irrigation potential and agricultural productivity of the Mahakoshal region, supporting thousands of farmers in the eastern and central parts of Madhya Pradesh.

113. (C) Small farmers are prohibited from utilizing groundwater resources.
Support for small farmers in Madhya Pradesh includes various schemes for private irrigation, such as the construction of farm ponds through Kapil Dhara and subsidies for solar pumps. There is no prohibition on small farmers using groundwater; in fact, many rely on wells and tubewells. The state focuses on making these resources more accessible and sustainable for small landholders rather than restricting their use.

114. (A) Both Statement I and Statement II are correct.
The Malwa plateau is an exceptionally productive agricultural region in Madhya Pradesh due to its natural advantages. Its deep black soils have a unique ability to retain moisture, which is ideal for commercial crops like soybean and cotton. These favorable conditions, combined with a suitable climate, have made Malwa the center of the state's commercial agriculture and a major producer of oilseeds.

115. (A) Cotton - Drip Irrigation
In water-scarpe regions, matching the right crop with an efficient irrigation method is essential. Cotton is a high-value crop that responds very well to drip irrigation, which delivers water directly to the roots and reduces waste. This pairing is increasingly promoted in the Nimar and Malwa regions to conserve limited water resources while maintaining high productivity for this important commercial cash crop.

Click Here to Buy book on Amazon

Pradesh. It fills the interval between the harvest of winter Rabi crops and the sowing of monsoon Kharif crops. With the help of irrigation, farmers grow crops like watermelons, cucumbers, and some pulses, making the most of the land during a time when it would otherwise remain fallow.

99. (B) Favorable climate and irrigation supporting bulky crops that lose weight quickly.
Sugar mills are concentrated in districts like Narsinghpur because sugarcane is a bulky crop that must be processed quickly after harvest. As the crop loses sucrose content soon after being cut, it is more efficient to have processing facilities located close to the fields. The combination of fertile soil and irrigation in these regions supports the large-scale cultivation needed to sustain these industrial units.

100. (C) They are quick to construct, localized, and cause minimal displacement.
Minor irrigation projects are vital for small and marginal farmers, especially in the hilly and tribal terrains of Madhya Pradesh. Unlike large dams, these projects are localized and relatively inexpensive to build. They involve smaller structures like tanks or check dams that do not require massive displacement of local populations, providing immediate and sustainable water benefits to the communities they serve in rugged landscapes.

101. (A) P-1, Q-2, R-3, S-4
Traditional water management in Madhya Pradesh varies by region. The Chandela tanks are famous in Bundelkhand, while the Haveli system for impounding rainwater in black soil is unique to the Mahakoshal region. Stepwells are a traditional feature of the Malwa and Nimar plains. In modern times, stop dams and check dams are used across the state's hilly streams for efficient watershed management.

102. (A) It supplies hydroelectricity exclusively to the state of Gujarat.
The Rajghat Dam, also known as the Rani Laxmibai Project, is an interstate project between Madhya Pradesh and Uttar Pradesh on the Betwa River. It provides irrigation and power to several districts in central India, including Guna and Ashoknagar. The claim that it supplies electricity exclusively to Gujarat is incorrect, as it is located far from Gujarat and serves the participating states of MP and UP.

103. (B) Pulses and Oilseeds
Madhya Pradesh is consistently recognized as a national leader in the production of pulses and oilseeds. It often holds the first rank in the country for crops like soybean and gram. This dominant position is a result of the state's diverse agro-climatic zones and the extensive cultivation of these crops across the Malwa and other regional plateaus, making it a critical contributor to India's food security.

104. (A) Both Statement I and Statement II are correct.
Participatory Irrigation Management is a strategy in Madhya Pradesh aimed at involving farmers in the management of water resources. By forming Water User Associations, the state empowers local farmers to manage the tertiary canal networks. This collaborative approach ensures that water is distributed more equitably and that the minor infrastructure is maintained efficiently, leading to better overall irrigation performance and crop productivity.

105. (C) Net sown permanent urban industrial zones
Land classification for agricultural purposes includes categories like pastures, grazing lands, and culturable wastelands. These are areas that are not currently being used for crops but have agricultural potential or ecological value. Urban industrial zones, however, are permanent non-agricultural land uses and are not part of the standard classification system for uncultivated agricultural land or wastelands within the state's rural land-use records.

106. (B) Dhar and Jhabua
The Mahi Project has been instrumental in addressing agricultural water shortages in the western tribal belt of Madhya Pradesh. By harnessing the Mahi River, the project provides essential irrigation to the districts of Dhar and Jhabua. This has significantly reduced the distress of farmers in these drought-prone areas, allowing for more stable crop production and improving the livelihoods of the local tribal communities.

107. (A) Jowar
In the context of Madhya Pradesh's agriculture, crops like cotton, sugarcane, and opium are

Downloaded from www.pdf.tube

rivers flow in various directions, providing life-sustaining water for irrigation, domestic use, and power generation across central and western parts of India.

37. (A) Anuppur
Mustard cultivation in Madhya Pradesh is heavily concentrated in the northern Gird tract, particularly in the districts of Morena, Bhind, and Gwalior. This region provides the cool temperatures and soil conditions necessary for oilseed crops like rapeseed and mustard. Anuppur, situated in the eastern part of the state, is characterized by different agro-climatic conditions and is primarily a rice-growing area.

38. (D) The Chambal region accounts for most of the state's ravine-affected wasteland.
Land degradation in Madhya Pradesh is most visible in the form of deep ravines created by the Chambal River and its tributaries. The Gird region, specifically around Morena and Bhind, contains the largest extent of these ravine-affected wastelands. Reclaiming these areas through leveling and afforestation is a major agricultural and environmental challenge for the state government in its northern districts.

39. (D) Raipur (undivided MP)
During the early years of the Green Revolution in India, the Intensive Agricultural District Programme was launched to promote modern farming techniques. In undivided Madhya Pradesh, the Raipur district was selected for this initiative due to its high potential for rice production. The program introduced high-yielding variety seeds, fertilizers, and improved irrigation practices, serving as a model for agricultural modernization in the region.

40. (D) Sheopur (Cardamom)
Spice production in Madhya Pradesh is localized based on climatic suitability. Mandsaur is famous for garlic, Guna for coriander, and Khargone for its high-quality red chillies. However, cardamom is a tropical spice that requires high humidity and specific forest environments found in southern India. It is not a major crop in Sheopur or any other part of the semi-arid northern Madhya Pradesh region.

NODIA

41. (B) Over-extraction for water-intensive crops without adequate groundwater recharge.
The Malwa region has witnessed a significant decline in groundwater levels primarily due to the unsustainable extraction of water for irrigation. The widespread cultivation of water-intensive crops, facilitated by the expansion of tubewells, has led to a situation where the annual draft exceeds the natural recharge. This imbalance has caused the water table to drop, threatening long-term agricultural sustainability in the region.

42. (C) The 'Bhavantar Bhugtan Yojana' was launched to ensure fixed export prices for all fruits.
Horticulture is a flourishing sector in Madhya Pradesh, with Burhanpur leading in banana production and Rewa known for guava. The state is also a national leader in garlic and onion production. While the Bhavantar Bhugtan Yojana was introduced to support farmers when market prices fall below the minimum support price, it was primarily for oilseeds and pulses, not specifically for all fruits.

43. (B) Delayed or deficient monsoon rains preventing the timely sowing of crops.
Current fallow land refers to areas that are left uncultivated for a single agricultural year. In the rainfed regions of Madhya Pradesh, this often happens when the monsoon is delayed or insufficient to provide the moisture needed for sowing. Without timely rain, farmers are unable to plant their Kharif crops, leading to a temporary increase in the extent of fallow lands in those districts.

44. (D) The physical extent of land on which crops are sown and harvested at least once during an agricultural year.
The net sown area represents the actual physical area of land used for growing crops during a specific agricultural year. Even if a piece of land is used for multiple crops in different seasons, it is only counted once in the net sown area. This metric is a crucial indicator of the total agricultural footprint and land-use efficiency within the state of Madhya Pradesh.

45. (C) Intensive application of Endosulfan
Organic farming in Madhya Pradesh focuses on sustainable practices that eliminate the use of synthetic chemicals. This includes the use

116. (D) It is an interstate project of Madhya Pradesh and Uttar Pradesh.
The Rajghat Dam is a significant interstate project developed on the Betwa River. It was built as a joint venture between the governments of Madhya Pradesh and Uttar Pradesh to share water and power resources. This collaboration provides irrigation to several districts in both states, helping to stabilize agriculture in the semi-arid regions that lie along their shared border in central India.

117. (D) Hoshangabad (Narmadapuram)
Hoshangabad, now known as Narmadapuram, is one of the most agriculturally advanced districts in Madhya Pradesh. It traditionally records very high levels of irrigation and gross cropped area due to its location in the fertile Narmada valley. The presence of large-scale irrigation projects like the Tawa and Barna canals ensures a reliable water supply, enabling intensive farming across multiple seasons throughout the year.

118. (A) P-3, Q-2, R-1, S-4
Madhya Pradesh shares several river valley projects with neighboring states. The Chambal project is a joint venture with Rajasthan, while the Bawanthadi project is shared with Maharashtra. The Urmil project involves cooperation with Uttar Pradesh, and the Bansagar project is a three-state agreement between Madhya Pradesh, Uttar Pradesh, and Bihar. these partnerships are essential for managing shared water resources effectively.

119. (A) Mawat
During the winter months in Madhya Pradesh, occasional light rainfall occurs due to western disturbances originating from the Mediterranean. This unseasonal but beneficial rain is locally referred to as Mawat. It is highly valued by farmers as it provide crucial moisture for the standing wheat and mustard crops during the Rabi season, often helping to increase the final yield of these winter grains.

120. (A) MP Sinchai Prabandhan Me Krishakon Ki Bhagidari Adhiniyam, 1999
The legal framework for Participatory Irrigation Management in Madhya Pradesh was established by the Sinchai Prabandhan Me Krishakon Ki Bhagidari Adhiniyam in 1999. this legislation provides the basis for the formation of Water User Associations, allowing farmers to take a lead role in managing and maintaining the irrigation systems. This policy aims to improve water use efficiency and ensure more equitable distribution.

121. (A) Kolar Project
Most large-scale river projects in Madhya Pradesh, like Bansagar, Sardar Sarovar, and Rajghat, are interstate ventures involving neighboring states. In contrast, the Kolar Project is an internal project of Madhya Pradesh, built primarily to provide drinking water to Bhopal and irrigation to the Sehore district. therefore, it is the odd one out among the listed major interstate joint river valley projects.

122. (A) Both Statement I and Statement II are correct.
Drip irrigation is a highly efficient technology, but its adoption is often limited by high initial setup costs, which can be a barrier for small farmers. To address this, the government of Madhya Pradesh provides substantial subsidies under various micro-irrigation schemes. these financial incentives make the technology more affordable, encouraging more farmers to transition to water-saving methods in the state's drier regions.

123. (B) State Institute of Agriculture Extension and Training (SIAET)
Bhopal, the capital city of Madhya Pradesh, hosts several important agricultural administrative and training centers. One such key institution is the State Institute of Agriculture Extension and Training, which focuses on enhancing the skills of agricultural officers and farmers. while other specialized research centers like the soybean institute are in Indore, Bhopal serves as the central hub for agricultural policy and extension training.

124. (B) The area which can be irrigated and is fit for cultivation.
The Cultivable Command Area is a standard metric used to define the scale and potential impact of an irrigation project. It represents the total land area that can be reached by the project's canal network and is suitable for growing crops. This area does not include forests or uncultivable wastelands, focusing instead on the land that will directly benefit from the irrigation water.

Click Here to Buy book on Amazon

(D) Ensure 100% foreign direct investment in coal mines located within the state.

69. Consider the following statements regarding the Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) in Madhya Pradesh:
I. It aims to separate agricultural and non-agricultural feeders.
II. It focuses on strengthening sub-transmission and distribution infrastructure in rural areas.
III. It aims to replace all conventional thermal plants with solar plants in rural areas.
Which of the above statement(s) is/are correct?
(A) I and II
(B) II and III
(C) I and III
(D) I, II and III

70. Which of the following is an odd one out among the power distribution companies (DISCOMs) operating in Madhya Pradesh?
(A) Madhya Kshetra Vidyut Vitaran Company
(B) Paschim Kshetra Vidyut Vitaran Company
(C) Poorv Kshetra Vidyut Vitaran Company
(D) Dakshin Kshetra Vidyut Vitaran Company

71. Which of the following sets of districts forms the primary "wind energy corridor" of Madhya Pradesh?
(A) Indore, Dewas, Ujjain
(B) Rewa, Satna, Sidhi
(C) Gwalior, Bhind, Morena
(D) Jabalpur, Mandla, Dindori

72. The power scenario in Madhya Pradesh transitioned from a deficit state to a surplus state largely due to:
(A) Banning power supply to the agricultural sector
(B) Capacity addition in thermal and renewable energy sectors
(C) Importing 100% of its electricity from Bhutan
(D) Shutting down heavy industries

73. Identify the incorrect statement regarding solar energy in Madhya Pradesh.
(A) The state has established a floating solar power plant on the Omkareshwar reservoir.
(B) Solar pumps are distributed to farmers under the PM-KUSUM scheme.
(C) The state's geographical location provides high solar insolation.
(D) Madhya Pradesh does not have a dedicated solar energy policy.

74. Which of the following is a primary objective of the Bureau of Energy Efficiency (BEE) programs in the state?
(A) Constructing new mega thermal power plants
(B) Providing free electricity to industries
(C) Promoting star-labeled energy-efficient appliances
(D) Regulating the price of coal

75. Match the following items in List I with those in List II and select the correct answer using the codes given below:
List I: (Energy Organization)
P. MP Urja Vikas Nigam
Q. MP Power Management Company
R. NTPC Vindhyachal
S. Satpura Thermal Power Station
List II: (Headquarters/Location)
1. Sarni
2. Singrauli
3. Jabalpur
4. Bhopal
(A) P-3, Q-4, R-1, S-2
(B) P-4, Q-2, R-3, S-1
(C) P-1, Q-3, R-2, S-4
(D) P-4, Q-3, R-2, S-1

76. The urban energy projects from municipal solid waste primarily aim to achieve which dual purpose?
(A) Water purification and solid waste disposal
(B) Fertilizer production and soil erosion control
(C) Urban aesthetics enhancement and noise reduction
(D) Waste management and renewable energy generation

77. Which of the following schemes is directly linked to the distribution of energy-efficient LED bulbs at subsidized rates in Madhya Pradesh?
(A) PM Ujjwala Yojana
(B) PM KISAN
(C) Ayushman Bharat

NODIA

CHAPTER 14
Energy Resources

1. The significance of Singrauli in thermal power generation is primarily due to the availability of:
(A) Large deposits of high-grade Anthracite coal imported from eastern states.
(B) Abundant reserves of Lignite coal suitable for local industrial consumption.
(C) Extensive Peat bogs found in the marshy regions surrounding the district.
(D) Thick seams of Bituminous and Sub-bituminous coal found in the local area.

2. Identify the correct pair of Coalfield and the Thermal Power Station it primarily supplies:
(A) Singrauli Coalfield - Satpura Thermal Power Station
(B) Pathakhera Coalfield - Vindhyachal Super Thermal Power Station
(C) Johila Coalfield - Sanjay Gandhi Thermal Power Station
(D) Sohagpur Coalfield - Chandni Thermal Power Station

3. Which of the following is not considered a conventional source of energy?
(A) Coal
(B) Petroleum
(C) Biomass
(D) Natural Gas

4. What is the installed capacity of the Omkareshwar Hydroelectric Project?
(A) 90 MW
(B) 400 MW
(C) 520 MW
(D) 1000 MW

5. Consider the following statements regarding the Satpura Thermal Power Station:
I. It is located in Sarni, Betul district.
II. It receives water from the Tawa Dam reservoir.
III. It is a joint venture between Madhya Pradesh and Gujarat.
Which of the above statement(s) is/are correct?
(A) I and II
(B) II and III
(C) I and III
(D) I, II and III

6. The Bargi Dam is officially known by which of the following names?
(A) Rani Laxmi Bai Sagar
(B) Rani Avanti Bai Lodhi Sagar
(C) Samrat Ashok Sagar
(D) Atal Sagar

7. Which of the following best describes the current energy scenario of Madhya Pradesh in terms of power availability?
(A) It remains a power-deficient state that is heavily dependent on energy imports from neighboring states.
(B) It is now a power-surplus state meeting its internal demands comfortably and reliably.
(C) It relies almost exclusively on renewable energy sources to power its expanding industrial sector.
(D) It faces significant energy crises during the monsoon season due to a severe lack of thermal plants.

8. Which organization operates the Vindhyachal Super Thermal Power Station?
(A) Madhya Pradesh Power Generating Company Limited
(B) National Thermal Power Corporation (NTPC)
(C) Reliance Power
(D) Damodar Valley Corporation

9. What is the installed generation capacity of the Indira Sagar Hydroelectric Project?
(A) 520 MW
(B) 1000 MW
(C) 1500 MW
(D) 400 MW

Downloaded from www.pdf.tube

(C) Bhander Power Station
(D) Amarkantak Power Station

32. Consider the following statements about wind energy potential in Madhya Pradesh:
I. The state ranks first in India in total installed wind power capacity.
II. Mandsaur, Ratlam, and Ujjain have high potential for wind energy generation.
III. Wind farms in the state are mostly operated by private sector companies.
Which of the above statement(s) is/are correct?
(A) I and II
(B) II and III
(C) I and III
(D) I, II and III

33. Which of the following statements is true regarding the Rana Pratap Sagar and Jawahar Sagar projects?
(A) Both projects are exclusively owned and operated by the Madhya Pradesh government.
(B) Power generated is shared equally between Madhya Pradesh and Rajasthan.
(C) Both power projects are situated entirely within the borders of Madhya Pradesh.
(D) They are the primary hydroelectric dams constructed on the Narmada river basin.

34. Which plant species has been heavily promoted in Madhya Pradesh under the state's Biofuel policy for biodiesel extraction?
(A) Neem (Azadirachta indica)
(B) Bamboo (Bambusoideae)
(C) Teak (Tectona grandis)
(D) Jatropha (Jatropha curcas)

35. What is the total installed capacity of the Rewa Ultra Mega Solar Power Project?
(A) 500 MW
(B) 750 MW
(C) 1000 MW
(D) 1500 MW

36. Small hydro power projects in Madhya Pradesh are generally defined as those with an installed capacity of up to:
(A) 5 MW
(B) 25 MW
(C) 100 MW
(D) 250 MW

37. The Gandhi Sagar Hydroelectric Project is located in which district of Madhya Pradesh?
(A) Mandsaur
(B) Neemuch
(C) Ratlam
(D) Ujjain

38. Which of the following regions in Madhya Pradesh is considered most suitable for wind power generation due to favourable wind speeds?
(A) Bundelkhand region
(B) Baghelkhand region
(C) Narmada Valley floor
(D) Western region (Malwa plateau)

39. Which district in Madhya Pradesh successfully established a biomass power plant based on rice husk?
(A) Bhind
(B) Gwalior
(C) Sheopur
(D) Dhar

40. Non-conventional energy sources are defined primarily by their:
(A) High cost of generation and limited availability
(B) Exclusive reliance on fossil fuel by-products
(C) Inability to be connected to the state power grid
(D) Renewable nature and minimal environmental impact

41. Arrange the following hydroelectric projects in Madhya Pradesh in descending order of their installed capacities:
I. Bargi Hydroelectric Project
II. Gandhi Sagar Hydroelectric Project
III. Indira Sagar Hydroelectric Project
IV. Omkareshwar Hydroelectric Project
Which of the following sequence is correct?
(A) III, IV, II, I
(B) III, II, IV, I
(C) IV, III, I, II
(D) IV, III, II, I

NODIA

Assertion (A): Pithead thermal power stations are highly preferred in Madhya Pradesh.
Reason (R): They minimize the cost and logistical challenges of long-distance coal transportation.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

20. The Amarkantak Thermal Power Station receives its coal supply primarily from which coalfield?
(A) Sohagpur coalfield
(B) Pathakhera coalfield
(C) Pench-Kanhan coalfield
(D) Mohpani coalfield

21. Which of the following hydroelectric projects is the oldest on the Chambal River?
(A) Rana Pratap Sagar
(B) Jawahar Sagar
(C) Gandhi Sagar
(D) Kota Barrage

22. Which district of Madhya Pradesh is widely known as the Energy Capital of the state due to its vast coal reserves and thermal power stations?
(A) Jabalpur
(B) Singrauli
(C) Chhindwara
(D) Shahdol

23. Which river provides water to the Sanjay Gandhi Thermal Power Station located in Birsinghpur?
(A) Narmada
(B) Tapti
(C) Betwa
(D) Johila

24. The Indira Sagar Hydroelectric Project is located in which district of Madhya Pradesh?
(A) Khargone
(B) Dhar
(C) Barwani
(D) Khandwa

25. The Vindhyachal Super Thermal Power Station is significant because it is:
(A) The only gas-based plant in Madhya Pradesh
(B) The largest capacity thermal power station in India
(C) Entirely powered by imported coal
(D) A captive power plant for the Bhilai Steel Plant

26. Identify the incorrect statement regarding the energy demand in Madhya Pradesh.
(A) The agricultural sector is a major consumer of electricity in the state
(B) Industrial demand for power is primarily concentrated in western Madhya Pradesh
(C) The state government provides subsidised electricity to agricultural consumers
(D) Rural household consumption exceeds industrial consumption in the state

27. The Omkareshwar Hydroelectric Project is situated on which river?
(A) Narmada
(B) Tapti
(C) Chambal
(D) Mahi

28. The Sanjay Gandhi Thermal Power Station is situated in which district of Madhya Pradesh?
(A) Umaria
(B) Shahdol
(C) Betul
(D) Khandwa

29. Which river basin holds the highest hydroelectric power potential in Madhya Pradesh?
(A) Chambal
(B) Son
(C) Narmada
(D) Betwa

30. What is the approximate installed capacity of the Amarkantak Thermal Power Station located in Chachai?
(A) 210 MW
(B) 450 MW
(C) 1200 MW
(D) 4760 MW

31. Which of the following is an odd one out based on the source of energy?
(A) Sanjay Gandhi Power Station
(B) Satpura Power Station

Click Here to Buy book on Amazon

R. Floating Solar Park
S. Upcoming 1500 MW Solar Park
List II: (Associated District)
1. Neemuch
2. Omkareshwar (Khandwa)
3. Rewa
4. Shajapur-Agar-Neemuch
(A) P-1, Q-3, R-4, S-2
(B) P-3, Q-2, R-1, S-4
(C) P-3, Q-1, R-2, S-4
(D) P-2, Q-1, R-3, S-4

51. Consider the following statements regarding small and micro hydel projects:
I. They require large reservoirs and cause massive displacement of people.
II. They are often built on minor rivers and irrigation canals.
III. They provide localized power generation, reducing transmission losses.
IV. Madhya Pradesh Urja Vikas Nigam acts as the nodal agency for their development.
Which of the above statement(s) is/are correct?
(A) I, II and III
(B) II, III and IV
(C) I, III and IV
(D) I, II, III and IV

52. Which district in Madhya Pradesh hosts the prominent gas-based power plant known as the Bhander Power Plant?
(A) Gwalior
(B) Shivpuri
(C) Guna
(D) Datia

53. The Rewa Ultra Mega Solar Power Project is spread across which tehsil of the Rewa district?
(A) Sirmour
(B) Teonthar
(C) Gurh
(D) Mauganj

54. The Biogas rural energy programme in Madhya Pradesh primarily targets which demographic?
(A) Heavy industries in urban centers
(B) Information Technology parks
(C) Rural households for cooking fuel and lighting
(D) State-owned thermal power plants

55. Which district is home to the Jamgodrani wind energy farm, one of the prominent wind farms in Madhya Pradesh?
(A) Dewas
(B) Rewa
(C) Sidhi
(D) Shahdol

56. Match the following items in List I with those in List II and select the correct answer using the codes given below:
List I: (Hydroelectric Project)
P. Indira Sagar
Q. Omkareshwar
R. Gandhi Sagar
S. Bargi
List II: (Installed Capacity)
1. 115 MW
2. 520 MW
3. 90 MW
4. 1000 MW
(A) P-4, Q-2, R-1, S-3
(B) P-4, Q-3, R-2, S-1
(C) P-2, Q-4, R-1, S-3
(D) P-1, Q-2, R-3, S-4

57. The Jatropha cultivation initiative in Madhya Pradesh was particularly focused on utilizing which type of land?
(A) Wastelands and marginal lands
(B) Highly fertile river basins
(C) Irrigated agricultural land
(D) Protected national parks

58. Which of the following states is considered to have a highly favourable environment for solar energy potential with around 300 days of clear sun?
(A) Madhya Pradesh
(B) Kerala
(C) Assam
(D) Meghalaya

59. What is the primary source material for Biomass energy plants operating in Madhya Pradesh?
(A) Hazardous industrial chemical waste collected from large manufacturing units.
(B) Spent nuclear fuel rods processed from central atomic energy stations.
(C) Agricultural residues such as mustard stalks, rice husk, and crop remains.

NODIA

42. The total installed hydroelectric capacity of Madhya Pradesh state sector projects is approximately in which of the following ranges?
(A) 500 - 800 MW
(B) 900 - 1500 MW
(C) 2000 - 3500 MW
(D) 5000 - 7000 MW

43. Identify the incorrect pair regarding renewable energy locations in Madhya Pradesh:
(A) Solar Park - Gurh
(B) Floating Solar - Bargi Dam
(C) Wind Farm - Dewas
(D) Wind Farm - Ratlam

44. Which of the following is the most appropriate statement regarding the significance of the Rewa Ultra Mega Solar Power Project?
(A) It provides electricity exclusively to rural households located within the Rewa district.
(B) It was funded entirely by the World Bank without any central government involvement.
(C) It is a unique floating solar power plant constructed on the Bansagar dam reservoir.
(D) It is the first Indian solar project to supply power to the Delhi Metro network.

45. Which of the following is the correct sequence of processes involved in electricity generation from Municipal Solid Waste (MSW)?
(A) Combustion → Segregation → Steam Generation → Turbine Rotation
(B) Segregation → Combustion → Steam Generation → Turbine Rotation
(C) Steam Generation → Segregation → Combustion → Turbine Rotation
(D) Segregation → Turbine Rotation → Combustion → Steam Generation

46. Consider the following projects:
I. Gandhi Sagar
II. Rana Pratap Sagar
III. Jawahar Sagar
Arrange the above projects in sequence from upstream to downstream along the Chambal River. Which of the following statement(s) is/are correct?
(A) I, II, III
(B) III, II, I
(C) II, I, III
(D) I, III, II

47. What is the main component of the gas produced in rural biogas plants in Madhya Pradesh?
(A) Propane
(B) Methane
(C) Butane
(D) Ethane

48. Consider the following statements regarding gas-based power generation in Madhya Pradesh:
I. It relies heavily on the Hazira-Vijaipur-Jagdishpur (HVJ) pipeline.
II. Gas-based plants are generally utilized to meet peak load demands.
III. The Bhander Power Project was established by the Essar Group.
IV. Gas-based generation accounts for more than 50% of the state's power output.
V. Gas power plants produce lower carbon emissions compared to coal plants.
Which of the above statement(s) is/are correct?
(A) I, II, III, and V
(B) II, III, IV, and V
(C) I, III, IV, and V
(D) I, II, III, and IV

49. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Examine these two statements carefully and select the correct answer.
Assertion (A): The Malwa region of Madhya Pradesh is highly preferred for setting up wind energy farms.
Reason (R): The region experiences high and consistent wind speeds suitable for turning wind turbines.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

50. Match the following items in List I with those in List II and select the correct answer using the codes given below:
List I: (Solar Project/Park Location)
P. Rewa Ultra Mega Solar
Q. Welspun Solar Project

NODIA

125. (C) To bridge the gap between irrigation potential created and that utilized.
Command Area Development programs are designed to maximize the benefits of irrigation projects once the dams and main canals are built. In Madhya Pradesh, these programs focus on bridging the gap between the total irrigation potential created and the actual area irrigated. This involves developing field channels, leveling land, and training farmers to ensure that the available water is used efficiently on their farms.

126. (A) Continuous decline of the static groundwater table
When an agricultural region relies exclusively on tubewells for irrigation without any significant efforts to recharge the aquifers, the extraction eventually exceeds the natural replenishment. Over a decade, this leads to a continuous and measurable decline in the static groundwater table. This phenomenon is a serious concern in parts of the Malwa plateau, where falling water levels threaten the long-term viability of intensive farming.

127. (B) Bundelkhand
The Ken-Betwa River Interlinking Project is a major national initiative designed to transfer surplus water from the Ken River to the Betwa River. This transfer is primarily intended to benefit the drought-prone Bundelkhand region, which spans parts of Madhya Pradesh and Uttar Pradesh. By providing a reliable source of water for irrigation and drinking, the project aims to transform the agricultural economy of this water-scarce area.

128. (D) It is entirely located within the geographical boundary of Rajasthan.
The Rajghat Dam is a significant water resource project situated on the Betwa River, serving as a joint venture between Madhya Pradesh and Uttar Pradesh. It provides essential irrigation and power to several districts in both states. The claim that it is located entirely within Rajasthan is incorrect, as the project is situated far to the east of the Rajasthan border on the MP-UP boundary.

129. (B) To significantly reduce water loss due to deep percolation and seepage.
Lining canals with concrete is a crucial measure for improving the efficiency of large-scale irrigation projects. In traditional unlined canals, a significant amount of water is lost as it seeps into the ground before reaching the fields. By lining the main canals and distributaries, projects like Bansagar and Bargi can minimize these losses, ensuring that more water is delivered to the farmers at the end of the system.

130. (A) Promoting diversification, resilient agriculture, micro-irrigation, and processing.
To ensure long-term agricultural prosperity in Madhya Pradesh, the state must move beyond traditional grain production. Emphasizing crop diversification into high-value horticulture and implementing water-efficient micro-irrigation technologies are essential steps. Additionally, enhancing local processing infrastructure and adopting climate-resilient farming practices will help bridge yield gaps and provide sustainable income growth for farmers across the state's diverse agricultural landscape.

www.nodia.in

Downloaded from www.pdf.tube

(D) Coal bed methane extracted from deep underground reserves in the state.

60. What are the key features of the Neemuch Solar Power Plant (Welspun Solar MP project)?
(A) It utilizes specialized concentrated solar power (CSP) technology instead of photovoltaic cells.
(B) It has a 151 MW capacity and was one of India's largest single-site plants at commissioning.
(C) It is a joint venture between the state government and a prominent Japanese consortium.
(D) It is a captive plant solely dedicated to powering agricultural pumps in the Malwa region.

61. Which state-owned entity is designated as the holding company for the state's power distribution and transmission companies?
(A) Madhya Pradesh Power Generating Company Limited
(B) Madhya Pradesh Urja Vikas Nigam Limited
(C) Madhya Pradesh Power Management Company Limited
(D) Madhya Pradesh Electricity Regulatory Commission

62. Which district is associated with the proposed floating solar power plant of 600 MW capacity?
(A) Khandwa
(B) Chhindwara
(C) Mandla
(D) Seoni

63. Under the rural electrification status in Madhya Pradesh, what does the Saubhagya Scheme primarily ensure?
(A) Electrification of all willing un-electrified households
(B) Free solar water pumps for all farmers
(C) Setting up wind turbines in every village panchayat
(D) Complete replacement of agricultural grid lines with solar lines

64. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Examine these two statements carefully and select the correct answer.
Assertion (A): The share of renewable energy in Madhya Pradesh's total power matrix has seen a rapid increase in the last decade.
Reason (R): The state government has offered favorable policies, land allocation, and single-window clearances for green energy projects.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

NODIA

65. Which nodal agency is responsible for implementing energy conservation initiatives and coordinating with the Bureau of Energy Efficiency (BEE) in Madhya Pradesh?
(A) MP Urja Vikas Nigam Limited
(B) MP Pollution Control Board
(C) MP State Mining Corporation
(D) MP Power Generating Company Limited

66. In which year was the Madhya Pradesh State Electricity Board (MPSEB) originally established, making it the first state electricity board in India?
(A) 1948
(B) 1950
(C) 1956
(D) 1960

67. Which city in Madhya Pradesh was among the first to successfully install a Bio-CNG plant processing municipal solid waste?
(A) Jabalpur
(B) Satna
(C) Indore
(D) Ujjain

68. The "Ujwal DISCOM Assurance Yojana (UDAY)" was adopted by Madhya Pradesh primarily to:
(A) Distribute energy-efficient LED bulbs to all households in the urban sectors.
(B) Improve the operational and financial turnaround of power distribution companies.
(C) Fund the construction of the Indira Sagar Dam to increase generation capacity.

10. Match the following items in List I with those in List II and select the correct answer using the codes given below:
List I: (Thermal Power Station)
P. Sanjay Gandhi Thermal Power Station
Q. Satpura Thermal Power Station
R. Amarkantak Thermal Power Station
S. Vindhyachal Super Thermal Power Station
List II: (Location)
1. Sarni
2. Birsinghpur
3. Waidhan
4. Chachai
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-2, S-1
(C) P-2, Q-1, R-4, S-3
(D) P-2, Q-4, R-1, S-3

11. What is the installed capacity of the Gandhi Sagar Hydroelectric Project?
(A) 99 MW
(B) 115 MW
(C) 172 MW
(D) 400 MW

12. The definition of conventional energy sources implies that they are:
(A) Inexhaustible and environmentally friendly
(B) Recently developed technologies like solar panels
(C) Non-renewable and exist in limited quantities
(D) Exclusively found in oceanic reserves

13. Consider the following statements regarding thermal power generation in Madhya Pradesh:
I. Coal transportation relies heavily on the railway network known as merry-go-round (MGR) systems for pithead stations.
II. Vindhyachal Super Thermal Power Station uses an MGR system for coal transport from Nigahi mines.
III. Thermal power constitutes less than 40% of the state's total installed capacity.
IV. Fly ash management is a critical environmental aspect of these power plants.
Which of the above statement(s) is/are correct?
(A) I, II and III
(B) II, III and IV
(C) I, II and IV
(D) I, III and IV

14. Which of the following thermal power plants is primarily supported by the Pathakhera coal fields?
(A) Vindhyachal Super Thermal Power Station
(B) Amarkantak Thermal Power Station
(C) Satpura Thermal Power Station
(D) Sanjay Gandhi Thermal Power Station

15. Identify the incorrect statement about the Bargi Hydroelectric Project.
(A) It is a major dam constructed across the Narmada River basin.
(B) It is situated within the geographical limits of the Jabalpur district.
(C) Its total installed power generation capacity is rated at 90 MW.
(D) It is a joint venture project between Madhya Pradesh and Maharashtra.

16. What is the primary source of conventional energy in Madhya Pradesh?
(A) Coal
(B) Natural Gas
(C) Hydroelectricity
(D) Nuclear Power

17. Which of the following represents the cause and effect relationship concerning the Indira Sagar project?
(A) Cause: High reservoir capacity; Effect: Assured year-round power and flood control.
(B) Cause: Building the dam; Effect: Significant decrease in downstream irrigation.
(C) Cause: Moving the power house; Effect: Complete and permanent halt of generation.
(D) Cause: Reservoir siltation; Effect: Immediate and drastic increase in the energy tariff.

18. Which thermal power station was the first to be established in Madhya Pradesh?
(A) Chandni Thermal Power Station
(B) Satpura Thermal Power Station
(C) Amarkantak Thermal Power Station
(D) Sanjay Gandhi Thermal Power Station

19. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Examine these two statements carefully and select the correct answer.

Click Here to Buy book on Amazon

(D) UJALA Scheme

78. Where is the headquarters of the Madhya Pradesh Power Management Company Limited (MPPMCL) located?
(A) Bhopal
(B) Indore
(C) Gwalior
(D) Jabalpur

79. Identify the correct pair of Renewable Energy form and its common application in Madhya Pradesh:
(A) Wind Energy - Powering rural biogas stoves
(B) Solar Photovoltaic - Grid-connected large scale power parks
(C) Biomass Energy - Operating heavy trains
(D) Micro Hydel - Desalination of seawater

80. Arrange the following components of the power sector network in the correct sequence from generation to consumer:
I. Distribution Substation
II. Generating Station
III. Transmission Grid
IV. Consumer Meter
Which of the following sequence is correct?
(A) II, III, I, IV
(B) II, I, III, IV
(C) III, II, I, IV
(D) II, III, IV, I

81. The unbundling of the MP State Electricity Board into separate generation, transmission, and distribution companies was done in accordance with which legislation?
(A) Electricity Act, 1910
(B) Electricity (Supply) Act, 1948
(C) Electricity Act, 2003
(D) Energy Conservation Act, 2001

82. Match the following items in List I with those in List II and select the correct answer using the codes given below:
List I: (Energy Concept)
P. Peak Load Deficit
Q. Base Load
R. Smart Grid
S. Energy Conservation
List II: (Description)
1. Minimum level of demand on an electrical grid over 24 hours
2. Integrating digital technology into the power network
3. Reducing energy consumption through efficiency
4. Shortfall of power during maximum demand periods
(A) P-4, Q-1, R-2, S-3
(B) P-1, Q-4, R-3, S-2
(C) P-4, Q-2, R-1, S-3
(D) P-2, Q-1, R-4, S-3

NODIA

83. Consider the following statements regarding the Renewable Energy Policy of Madhya Pradesh:
I. It aims to promote private investment in the renewable energy sector.
II. It offers exemptions on electricity duty for a specified period for renewable projects.
III. It strictly prohibits the use of agricultural land for solar parks.
IV. It encourages the setting up of pumped hydro storage systems.
V. It provides single-window clearance for renewable energy developers.
Which of the above statement(s) is/are correct?
(A) I, II, III, and V
(B) I, II, IV, and V
(C) II, III, IV, and V
(D) I, III, IV, and V

84. The separation of agricultural and non-agricultural feeders in MP was undertaken to:
(A) Increase the overall electricity tariff for all agricultural consumers in the state.
(B) Decrease the total power supply provided to heavy industries and business units.
(C) Provide continuous power to households and regulated power to the agricultural sector.
(D) Prevent local wildlife from accessing water sources near the distribution lines.

85. Which of the following is the most appropriate description of a 'Micro Hydel Project'?
(A) A hydroelectric project built exclusively on the power of ocean tides.
(B) A project generating a total capacity between 10 MW to 25 MW of electricity.
(C) A project generating up to 100 kW of power, usually for a local community.
(D) A backup diesel-based generator used in

I. Coal accounts for the majority of the base load power generation in MP.
II. Hydro power is often used to meet peak load requirements.
III. Solar power provides consistent output during night hours.
IV. Wind power output varies seasonally.
Which of the above statement(s) is/are correct?
(A) I, II and IV
(B) I, III and IV
(C) II, III and IV
(D) I, II, III and IV

107. The term "AT&C losses" in the context of power distribution in Madhya Pradesh stands for:
(A) Aggregate Technical and Commercial losses
(B) Annual Transmission and Calculation losses
(C) Average Tariff and Collection losses
(D) Accumulated Transit and Current losses

108. From which reservoir does the Shri Singaji Thermal Power Project primarily draw its water?
(A) Indira Sagar
(B) Gandhi Sagar
(C) Tawa Dam
(D) Bansagar

109. Which of the following best explains why biogas is a highly suitable energy solution for rural Madhya Pradesh?
(A) It relies on imported natural gas which is heavily subsidized.
(B) It requires highly skilled engineers available in every village.
(C) It generates electricity in megawatt scales comparable to thermal plants.
(D) It utilizes locally abundant cattle dung and agricultural waste.

110. What is the total installed capacity of the powerhouses located at the Bansagar project?
(A) 115 MW
(B) 425 MW
(C) 520 MW
(D) 1000 MW

111. What is the significance of "Load Dispatch Centers" in Madhya Pradesh?
(A) They manufacture heavy electrical transformers for use in the state distribution grid.
(B) They are designated retail outlets for paying monthly electricity bills in cities.
(C) They are the primary state offices responsible for issuing licenses for coal mining.
(D) They monitor grid operations to balance power generation and demand in real-time.

112. Which among the following is not a functional thermal power plant in Madhya Pradesh?
(A) Shri Singaji Thermal Power Project
(B) Korba Super Thermal Power Plant
(C) Amarkantak Thermal Power Station
(D) Sanjay Gandhi Thermal Power Station

113. The installed power generation capacity of the Madikheda Dam project is:
(A) 20 MW
(B) 60 MW
(C) 150 MW
(D) 300 MW

114. What happens to the power transmission losses when the transmission voltage is increased in the state grid?
(A) Transmission losses increase proportionally
(B) Transmission losses decrease
(C) Transmission losses remain unaffected
(D) It causes immediate grid failure

115. Which of the following correctly describes the Maheshwar Hydroelectric Project?
(A) It is currently the largest hydroelectric power project in the state of Madhya Pradesh.
(B) It is a major dam built across the Tapti river to provide irrigation and power.
(C) It is a captive power plant solely dedicated to the Pithampur industrial area.
(D) It was originally conceived as India's first privately financed hydroelectric project.

116. The term 'Pumped Storage Hydroelectricity' refers to:
(A) Pumping water from deep underground aquifers to generate consistent power for villages.
(B) Using high-powered diesel pumps to drive water turbines during peak demand hours.
(C) Pumping river water directly into agricultural fields using subsidized electric pumps.

Downloaded from www.pdf.tube

96. Which of the following correctly categorizes 'Coke' and 'Coal Gas'?
(A) Primary energy sources
(B) Secondary energy sources derived from coal
(C) Renewable energy sources
(D) Nuclear energy variants

97. What is the approximate current contribution of renewable energy (excluding large hydro) to Madhya Pradesh's total installed capacity?
(A) Less than 5%
(B) Around 20-25%
(C) Exactly 50%
(D) Over 80%

98. Match the following items in List I with those in List II and select the correct answer using the codes given below:
List I: (Dam/Project)
P. Rajghat Hydroelectric Project
Q. Pench Hydroelectric Project
R. Tons Hydroelectric Project
S. Maheshwar Hydroelectric Project
List II: (River)
1. Narmada
2. Tons
3. Pench
4. Betwa
(A) P-4, Q-3, R-2, S-1
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-2, R-3, S-1
(D) P-3, Q-4, R-1, S-2

99. Identify the exception among the following entities involved in the energy sector of Madhya Pradesh:
(A) Madhya Pradesh Power Generating Company Limited
(B) Madhya Pradesh State Mining Corporation
(C) Madhya Pradesh Power Transmission Company Limited
(D) Madhya Pradesh Power Management Company Limited

100. Which of the following correctly describes the PM-KUSUM scheme's implementation in Madhya Pradesh?
(A) It provides free thermal power to all farmers registered with the state government.
(B) It aims to replace all existing diesel vehicles with electric vehicles in rural areas.
(C) It promotes standalone solar agriculture pumps and solarizing grid-connected pumps.
(D) It funds the construction of large hydroelectric dams for regional irrigation needs.

101. Which central government agency certifies the energy efficiency star ratings of electrical appliances sold in Madhya Pradesh?
(A) Bureau of Energy Efficiency (BEE)
(B) Central Electricity Authority (CEA)
(C) Ministry of New and Renewable Energy (MNRE)
(D) Indian Renewable Energy Development Agency (IREDA)

NODIA

102. Does Madhya Pradesh have potential for Pumped Storage Hydroelectricity?
(A) Yes, several projects have been proposed to stabilize the grid using renewables.
(B) No, because the state lacks the mountainous terrain required for such projects.
(C) No, because it is strictly banned under the Narmada Water Disputes Tribunal award.
(D) Yes, but these projects are only feasible in the deep ravines of the Chambal.

103. What is the proposed capacity of the Maheshwar Hydroelectric Project?
(A) 90 MW
(B) 400 MW
(C) 1000 MW
(D) 1500 MW

104. The Bansagar Hydroelectric Project is a joint venture among which states?
(A) MP, Rajasthan, and Gujarat
(B) MP, Maharashtra, and Gujarat
(C) MP, Chhattisgarh, and Odisha
(D) MP, UP, and Bihar

105. Which scheme emphasizes the energy efficiency of agricultural pumpsets in Madhya Pradesh?
(A) Rajiv Gandhi Grameen Vidyutikaran Yojana
(B) Mukhyamantri Krishak Udyemi Yojana
(C) Kisan Urja Suraksha evam Utthaan Mahabhiyan (KUSUM)
(D) Bhavantar Bhugtan Yojana

106. Consider the following statements:

9. (B) 1000 MW
The Indira Sagar Hydroelectric Project, located in the Khandwa district, is the largest powerhouse in the state of Madhya Pradesh. It features eight generating units, each with a capacity of one hundred and twenty-five megawatts, resulting in a total installed capacity of one thousand megawatts. This project is a cornerstone of the Narmada Valley development for both power and irrigation.

10. (C) P-2, Q-1, R-4, S-3
Sanjay Gandhi Thermal Power Station is located in Birsinghpur, while the Satpura plant is situated in Sarni. The Amarkantak station operates in Chachai, and the Vindhyachal Super Thermal Power Station is found in Waidhan, Singrauli. These locations are strategically chosen based on proximity to coal mines or water sources, ensuring efficient power generation and distribution across the state's electrical grid.

11. (B) 115 MW
The Gandhi Sagar Hydroelectric Project is the first of four dams built on the Chambal River under the Chambal Valley Development Scheme. It possesses an installed capacity of one hundred and fifteen megawatts. Located on the border of Mandsaur and Neemuch districts, it generates clean energy that is shared between the states of Madhya Pradesh and Rajasthan to support regional development.

12. (C) Non-renewable and exist in limited quantities
Conventional energy sources are defined by their traditional usage over many years and their non-renewable nature. These sources, such as coal and petroleum, exist in finite quantities within the earth's crust and cannot be replenished once exhausted. Their extraction and combustion typically have significant environmental impacts, contrasting with the sustainable characteristics associated with modern renewable or non-conventional energy alternatives.

13. (C) I, II and IV
Thermal power plants in Madhya Pradesh utilize efficient systems like merry-go-round railways for transporting coal directly from pithead mines. The Vindhyachal station specifically uses this system to fetch coal from the Nigahi mines. While thermal power remains the dominant source of electricity, environmental management of by-products like fly ash is essential for the sustainable operation of these large-scale generation facilities.

14. (C) Satpura Thermal Power Station
The Satpura Thermal Power Station, located in the Betul district, is strategically positioned near its primary fuel source. It receives its coal supply from the Pathakhera coal fields, which belong to the Western Coalfields Limited. This pithead arrangement minimizes logistical costs and ensures a consistent flow of fuel required for the continuous generation of electricity at the power plant.

15. (D) It is a joint venture project between Madhya Pradesh and Maharashtra.
The Bargi Hydroelectric Project is a significant multipurpose dam located on the Narmada River within the Jabalpur district. It provides approximately ninety megawatts of power and extensive irrigation. Unlike several other projects on the Narmada, it is not a joint venture with Maharashtra but was developed primarily to serve the irrigation and energy needs of the state of Madhya Pradesh independently.

16. (A) Coal
Coal serves as the primary and most significant source of conventional energy in Madhya Pradesh. The state possesses extensive coal reserves, particularly in the eastern regions like Singrauli and Shahdol. These reserves fuel numerous large-scale thermal power stations, which contribute the majority of the total electricity generated within the state, supporting both industrial growth and domestic consumption requirements.

17. (A) Cause: High reservoir capacity; Effect: Assured year-round power and flood control.
The Indira Sagar Project features a massive reservoir that provides a consistent water supply for hydroelectric generation. This high capacity allows for stable year-round power production and acts as an effective mechanism for flood control in the Narmada basin. These benefits demonstrate how large-scale water management infrastructure directly enhances regional energy security and protects downstream areas from seasonal river fluctuations.

Click Here to Buy book on Amazon

(D) Storing energy by pumping water to a high reservoir during off-peak power hours.

117. Consider the following statements regarding Energy Conservation Building Code (ECBC) in Madhya Pradesh:
I. It sets minimum energy standards for new commercial buildings.
II. It promotes natural lighting and better thermal insulation.
III. It is implemented under the guidance of MP Urja Vikas Nigam.
IV. It applies strictly to temporary agricultural structures.
V. It is a vital part of the state's energy conservation strategy.
Which of the above statement(s) is/are correct?
(A) I, II, III, and V
(B) II, III, IV, and V
(C) I, III, IV, and V
(D) I, II, IV, and V

118. Which of the following hydroelectric projects is built on the Sindh river?
(A) Rajghat Dam
(B) Halali Dam
(C) Barna Dam
(D) Madikheda Dam (Mohini Sagar)

119. Consider the following sequence of steps for Biofuel (Biodiesel) production from Jatropha:
I. Seed Extraction
II. Transesterification
III. Oil Expelling
IV. Plant Harvesting
Which is the correct chronological sequence?
(A) IV, I, III, II
(B) I, IV, II, III
(C) IV, III, I, II
(D) IV, I, II, III

120. Which river hosts the Bansagar Hydroelectric Project?
(A) Son
(B) Betwa
(C) Ken
(D) Tons

121. Consider the following coal fields of Madhya Pradesh and arrange them in sequence from east to west:
I. Singrauli
II. Sohagpur
III. Pench-Kanhan
IV. Pathakhera
Which of the following sequence is correct?
(A) I, II, III, IV
(B) IV, III, II, I
(C) I, III, II, IV
(D) II, I, IV, III

122. Under the Madhya Pradesh Renewable Energy Policy, which mechanism obligates distribution companies to purchase a certain minimum percentage of their total power from renewable sources?
(A) Feed-in Tariff (FiT)
(B) Net Metering
(C) Gross Metering
(D) Renewable Purchase Obligation (RPO)

123. The development of 'Solar Parks' across the state is primarily aimed at:
(A) Creating tourist attractions in the desert regions of the state to promote eco-tourism.
(B) Replacing agricultural farms entirely with solar panels to increase energy production.
(C) Providing a plug-and-play model with infrastructure for private solar developers.
(D) Supplying electric power exclusively to the Indian Railways for their local operations.

124. What is the primary role of the State Electricity Regulatory Commission (MPERC)?
(A) Constructing new dams
(B) Determining the electricity tariff and regulating the power sector
(C) Mining coal
(D) Manufacturing solar panels

125. The thermal power plants of Singrauli are known for emitting which specific pollutant that requires large-scale ash dykes for management?
(A) Radioactive waste
(B) Ozone
(C) Fly Ash
(D) Chlorofluorocarbons

126. Match the following items in List I with those in List II and select the correct answer using the codes given below:
List I: (Capacity/Metric)

Downloaded from www.pdf.tube

27. (A) Narmada
The Omkareshwar Hydroelectric Project is built across the Narmada River in the Khandwa district. It is a multipurpose project that provides irrigation and generates five hundred and twenty megawatts of hydroelectric power. The dam is part of a series of major water management structures on the Narmada, contributing significantly to the state's renewable energy portfolio and regional water security.

28. (A) Umaria
The Sanjay Gandhi Thermal Power Station is located at Birsinghpur, which falls within the Umaria district of Madhya Pradesh. This plant is a key facility for the state's power generation company, utilizing local coal and water resources to produce electricity. Its presence has contributed to the industrial development of the Umaria region while supporting the overall energy needs of the state grid.

29. (C) Narmada
The Narmada River basin holds the highest potential for hydroelectric power generation in Madhya Pradesh due to its large volume of water and the significant drop in elevation along its course. Several mega projects, including Indira Sagar and Omkareshwar, have been developed to harness this potential. The basin remains the focus of extensive water resource planning for both energy and irrigation.

30. (A) 210 MW
The Amarkantak Thermal Power Station, located in Chachai, has an approximate installed capacity of two hundred and ten megawatts. While it is smaller than mega-projects like Vindhyachal, it remains an important functional unit in the state's power generation network. Its location allows it to efficiently utilize the coal reserves found in the nearby eastern coalfields of the state of Madhya Pradesh.

31. (C) Bhander Power Station
The Sanjay Gandhi, Satpura, and Amarkantak stations are all coal-based thermal power plants that rely on traditional fossil fuels for generation. In contrast, the Bhander Power Station, located in Datia, is a gas-based power plant. This difference in primary fuel source makes the Bhander facility a distinct exception when compared to the dominant coal-fired infrastructure located across the state of Madhya Pradesh.

32. (B) II and III
Madhya Pradesh possesses significant wind energy potential, particularly in districts like Mandsaur, Ratlam, and Ujjain where wind speeds are favorable. Most of these wind farms are developed and operated by private sector companies under state-promoted policies. While the state is a major player in renewable energy, it does not currently rank first in India for total installed wind power capacity.

33. (B) Power generated is shared equally between Madhya Pradesh and Rajasthan.
The Rana Pratap Sagar and Jawahar Sagar projects are vital components of the Chambal Valley development plan. These projects are joint ventures between Madhya Pradesh and Rajasthan. According to the interstate agreement, the hydroelectric power generated from these dams is shared equally between the two states, providing a critical source of clean energy to support their respective industrial and agricultural sectors.

34. (D) Jatropha (Jatropha curcas)
Under the state's Biofuel policy, Jatropha curcas has been heavily promoted for the extraction of biodiesel. This plant is well-suited for growth on wastelands and marginal lands, which prevents competition with food crops. The initiative aims to reduce dependence on fossil fuels and promote rural employment through the cultivation and processing of these seeds into sustainable bio-based energy sources.

35. (B) 750 MW
The Rewa Ultra Mega Solar Power Project is one of the largest single-site solar plants in the world, with a total installed capacity of seven hundred and fifty megawatts. It consists of three units of two hundred and fifty megawatts each. This landmark project has received international recognition for its innovative structural and financial model, significantly boosting the state's renewable energy profile.

36. (B) 25 MW
Small hydro power projects in Madhya Pradesh are defined as those with an installed capacity of

NODIA

ANSWERS

1. (D) Thick seams of Bituminous and Sub-bituminous coal found in the local area.
Singrauli, known as the energy capital of Madhya Pradesh, possesses massive coal reserves. These thick seams consist primarily of bituminous and sub-bituminous coal, which are essential for feeding large-scale thermal power plants. The local availability of these energy-rich resources reduces transportation costs and ensures a steady fuel supply for critical power generation projects throughout the entire industrial region.

2. (C) Johila Coalfield - Sanjay Gandhi Thermal Power Station
The Sanjay Gandhi Thermal Power Station, situated in Birsinghpur, Umaria district, draws its primary fuel from the Johila coalfield. This logistical proximity between the coal source and the generating station optimizes fuel supply efficiency. Other stations like Satpura and Vindhyachal rely on the Pathakhera and Singrauli fields respectively, highlighting the strategic location of plants near specific coal-bearing regions.

3. (C) Biomass
Conventional energy sources typically include non-renewable fossil fuels like coal, petroleum, and natural gas, which have been used for decades. Biomass is categorized as a non-conventional or renewable energy source because it is derived from organic matter that can be replenished. It offers a more sustainable alternative to traditional fuels, significantly reducing the carbon footprint of the energy sector.

4. (C) 520 MW
The Omkareshwar Hydroelectric Project is a significant multi-purpose dam on the Narmada River. It features eight turbines, each having a capacity of sixty-five megawatts, totaling an installed capacity of five hundred and twenty megawatts. This project plays a vital role in meeting the state's peak load power requirements while simultaneously supporting irrigation and water supply needs for surrounding regions.

5. (A) I and II
The Satpura Thermal Power Station is a major facility located in the Sarni region of Betul district. It utilizes water from the Tawa Dam reservoir for its cooling processes and operational needs. While it serves the state's grid, it is primarily an initiative of the state power company rather than being a joint venture specifically between Madhya Pradesh and Gujarat.

6. (B) Rani Avanti Bai Lodhi Sagar
The Bargi Dam is one of the earliest major dams completed on the Narmada River in Madhya Pradesh. It was renamed Rani Avanti Bai Lodhi Sagar in honor of the famous female warrior queen. This multipurpose project provides significant irrigation facilities to the Jabalpur and Narsinghpur districts and contributes ninety megawatts of hydroelectric power to the state's total capacity.

7. (B) It is now a power-surplus state meeting its internal demands comfortably and reliably.
Madhya Pradesh has undergone a major transformation in its power sector over the last decade. Through massive capacity additions in both thermal and renewable sectors, it has transitioned from a power-deficit state to a power-surplus one. This ensures that the internal electricity demands of the domestic, industrial, and agricultural sectors are met reliably without needing consistent external energy imports.

8. (B) National Thermal Power Corporation (NTPC)
The National Thermal Power Corporation, a prominent central public sector undertaking, operates the Vindhyachal Super Thermal Power Station in Singrauli. This facility stands as one of the largest thermal power plants in the country. Its strategic location near coal mines and management by NTPC ensures efficient large-scale electricity generation, which is distributed across various states including Madhya Pradesh and Maharashtra.

Click Here to Buy book on Amazon

small villages during power cuts.

86. How does the per capita power consumption of Madhya Pradesh generally compare to the national average?
(A) It is nearly triple the national average due to heavy industrial concentration.
(B) It is historically lower but is rapidly approaching the current national average.
(C) It is significantly higher than any other Indian state in the central region.
(D) It has continuously and drastically declined over the course of the last decade.

87. Which city in Madhya Pradesh is famously known to have an extensive network of solar-powered traffic signals?
(A) Bhopal
(B) Indore
(C) Gwalior
(D) Ujjain

88. What is the primary role of the Madhya Pradesh Power Transmission Company Limited (MPPTCL)?
(A) Generating electricity from thermal sources in various state-owned stations.
(B) Transmitting high-voltage electricity from generation plants to substations.
(C) Selling electricity directly to residential and commercial consumers in the state.
(D) Manufacturing solar panels and wind turbines for large-scale renewable projects.

89. Which factor is considered a negative exception (a disadvantage) for wind power generation in Madhya Pradesh?
(A) Wind speeds are generally high throughout the year across the entire state.
(B) Wind power generation is highly intermittent and seasonal compared to thermal power.
(C) Wind farms require zero land footprint.
(D) Wind turbines enhance the aesthetic value of urban centers.

90. Which technology is fundamental to the implementation of a Smart Grid in Madhya Pradesh?
(A) Advanced Metering Infrastructure (Smart Meters)
(B) Merry-go-round coal transport systems
(C) Open-cast coal mining equipment
(D) Traditional analog electromechanical meters

91. The Shri Singaji Thermal Power Project is located in which district?
(A) Burhanpur
(B) Khandwa
(C) Khargone
(D) Dhar

92. Energy generated from the incineration of municipal solid waste is primarily utilized for:
(A) Heating rural agricultural greenhouses during the winter season to protect crops.
(B) Running the Bhopal Metro system exclusively on energy derived from urban waste.
(C) Direct grid integration for municipal electricity consumption in local areas.
(D) Exporting power to neighboring states to meet their renewable energy targets.

93. Identify the correct sequence of districts to visit if one travels from the site of the largest solar plant (Rewa) to the largest thermal plant (Vindhyachal) in MP:
(A) Rewa → Satna → Panna
(B) Rewa → Jabalpur → Chhindwara
(C) Rewa → Sidhi → Singrauli
(D) Rewa → Shahdol → Anuppur

94. A major initiative taken by the MP government to reduce AT&C losses is:
(A) Shutting down rural electrification
(B) Banning the use of air conditioners
(C) Installing smart meters and conducting energy audits
(D) Relying entirely on off-grid solar solutions

95. Which of the following pairs is incorrectly matched regarding interstate joint venture power projects?
(A) Rajghat Project - MP and Uttar Pradesh
(B) Bansagar Project - MP and Chhattisgarh
(C) Gandhi Sagar - MP and Rajasthan
(D) Pench Hydroelectric Project - MP and Maharashtra

NODIA

18. (A) Chandni Thermal Power Station
Established in 1953 in the Burhanpur district, the Chandni Thermal Power Station holds the distinction of being the first thermal power plant in Madhya Pradesh. It was originally built with a small capacity to provide electricity specifically to the Nepanagar Paper Mill. This historical project marked the beginning of large-scale thermal power development in the state, which has since expanded significantly.

19. (A) Both A and R are true and R is the correct explanation of A.
Pithead thermal power stations are built very close to coal mines to optimize operational efficiency. This arrangement is highly preferred in Madhya Pradesh because it significantly reduces the expenses and logistical difficulties associated with transporting large quantities of coal over long distances. By locating plants at the source, the state ensures a more reliable and cost-effective electricity generation process.

20. (A) Sohagpur coalfield
The Amarkantak Thermal Power Station, situated in Chachai, Anuppur district, is strategically located near its primary fuel source. It receives coal supplies mainly from the Sohagpur coalfield located in the Shahdol district. This proximity ensures a cost-effective and continuous supply of fuel, which is necessary for maintaining the station's electricity generation capacity to serve the eastern parts of the state.

21. (C) Gandhi Sagar
The Gandhi Sagar Dam is the oldest hydroelectric project on the Chambal River, with its foundation stone laid in 1954. It was the first stage of the Chambal Valley development project. Following its completion, other downstream projects like Rana Pratap Sagar and Jawahar Sagar were established. It continues to be a vital source of renewable energy for Madhya Pradesh and Rajasthan.

22. (B) Singrauli
Singrauli is widely recognized as the Energy Capital of Madhya Pradesh due to its immense reserves of coal and the concentration of several mega thermal power projects. The district hosts both state and central power plants, including the massive Vindhyachal Super Thermal Power Station. Its industrial landscape is dominated by mining and power generation, which are critical to India's energy security.

23. (D) Johila
The Sanjay Gandhi Thermal Power Station is located in Birsinghpur within the Umaria district. This power station relies on the Johila River to meet its substantial water requirements for cooling and steam generation processes. The availability of water from this local river, combined with nearby coal supplies, makes Birsinghpur an ideal and strategic location for large-scale thermal power production.

24. (D) Khandwa
The Indira Sagar Hydroelectric Project is situated on the Narmada River in the Khandwa district of Madhya Pradesh. It is a major component of the Narmada Valley Project and features one of the largest reservoirs in India. The project provides significant hydroelectric power, irrigation, and drinking water, making it a vital piece of infrastructure for the economic development of the state.

25. (B) The largest capacity thermal power station in India
The Vindhyachal Super Thermal Power Station, located in Singrauli, is notable for being the largest thermal power plant in India in terms of total installed capacity. Operated by the National Thermal Power Corporation, it utilizes coal from the surrounding Singrauli coalfields. Its massive generation capacity is essential for maintaining grid stability and meeting the high electricity demands of multiple Indian states.

26. (D) Rural household consumption exceeds industrial consumption in the state
In Madhya Pradesh, the industrial and agricultural sectors are the dominant consumers of electricity. While rural household electrification has expanded significantly under various government schemes, their total power consumption generally does not exceed the massive energy demands required for industrial operations and large-scale agricultural pumping. The state provides subsidized power to farmers, further highlighting the significance of the agricultural sector.

Downloaded from www.pdf.tube

P. Rewa Solar Plant Capacity
Q. Omkareshwar Hydro Capacity
R. Gandhi Sagar Hydro Capacity
S. Bargi Hydro Capacity

List II: (Value approx. context for MP)
1. 90 MW
2. 115 MW
3. 520 MW
4. 750 MW

(A) P-4, Q-3, R-2, S-1
(B) P-3, Q-4, R-1, S-2
(C) P-4, Q-2, R-3, S-1
(D) P-1, Q-2, R-3, S-4

127. Consider a scenario where there is significant siltation in the reservoir of a hydroelectric dam. Which of the following is the most likely long-term effect?
(A) A significant increase in the total power generation capacity of the hydroelectric dam.
(B) Decrease in the water storage capacity and reduced power generation lifespan.
(C) Immediate structural failure of the concrete dam due to excessive weight on the base.
(D) Greatly improved aquatic biodiversity in the reservoir through nutrient enrichment.

128. Which of the following is an odd one out based on the technology used for electricity generation?
(A) Steam turbines
(B) Hydro turbines
(C) Wind turbines
(D) Photovoltaic cells

129. What is the main benefit of 'Net Metering' implemented for rooftop solar panels in Madhya Pradesh?
(A) It completely disconnects the urban household from the state-owned power grid system.
(B) It allows consumers to feed surplus solar energy to the grid and get credit for it.
(C) It prevents the utility company from charging any fixed maintenance costs to the user.
(D) It restricts residential solar generation strictly to the nighttime hours of operation.

130. The "Green Energy Corridor" project being implemented in Madhya Pradesh is specifically designed to:
(A) Infrastructure to evacuate renewable energy to the national grid.
(B) Planting trees along all state highways to increase the green cover.
(C) Replacing all street lights with green LED bulbs to save energy.
(D) Constructing a canal system linking the Narmada and Kshipra rivers.

NODIA

www.nodia.in

up to twenty-five megawatts. These projects are categorized as renewable energy sources and are favored due to their lower environmental impact and lack of large-scale displacement. They are often built on smaller rivers or irrigation canals to provide localized and sustainable electricity to nearby communities.

37. (A) Mandsaur
The Gandhi Sagar Hydroelectric Project is located on the Chambal River in the Mandsaur district. It is an integral part of the first stage of the Chambal Valley Development Project. The dam creates a vast reservoir that not only provides water for power generation but also supports extensive irrigation across the border regions of Madhya Pradesh and Rajasthan.

38. (D) Western region (Malwa plateau)
The Western region of Madhya Pradesh, particularly the Malwa plateau, is considered most suitable for wind energy generation. The topography of this area facilitates consistent and high wind speeds required to rotate wind turbines effectively. Districts like Dewas, Ratlam, and Mandsaur have become hubs for wind farm development, hosting a significant portion of the state's total wind power capacity.

39. (D) Dhar
The Dhar district in Madhya Pradesh has successfully established a biomass power plant that utilizes rice husk as its primary fuel source. Biomass plants are an important part of the state's renewable energy strategy, as they provide a sustainable way to dispose of agricultural waste while generating electricity. Such projects also provide an additional source of income for local farmers.

40. (D) Renewable nature and minimal environmental impact
Non-conventional energy sources, also known as renewable energy, are defined by their ability to be replenished naturally and their minimal impact on the environment. These include solar, wind, biomass, and small hydro power. Unlike fossil fuels, they do not deplete over time and produce significantly fewer greenhouse gas emissions, making them essential for sustainable development and climate change mitigation.

41. (A) III, IV, II, I
Ranking hydroelectric projects by capacity is essential for understanding the state's power profile. The Indira Sagar project leads with one thousand megawatts, followed by Omkareshwar at five hundred and twenty megawatts. The Gandhi Sagar plant has one hundred and fifteen megawatts, while the Bargi project generates ninety megawatts. This hierarchy reflects the scale of infrastructure investment in the Narmada and Chambal basins.

42. (C) 2000 - 3500 MW
The total installed hydroelectric capacity of the state sector projects in Madhya Pradesh currently falls within the range of two thousand to three thousand five hundred megawatts. This capacity is primarily derived from several major dams on the Narmada and Chambal rivers. These projects provide essential peak load support to the state's power grid and are a cornerstone of its renewable energy.

43. (B) Floating Solar - Bargi Dam
While Madhya Pradesh is actively developing floating solar technology, the most prominent and large-scale floating solar project is being established on the Omkareshwar reservoir, not the Bargi Dam. Other pairs, such as the solar park at Gurh in Rewa and wind farms in Dewas and Ratlam, are correctly matched with their established or planned renewable energy infrastructure locations.

44. (D) It is the first Indian solar project to supply power to the Delhi Metro network.
The Rewa Ultra Mega Solar Power Project is significant for being the first solar project in India to provide electricity to an institutional customer outside the state, specifically the Delhi Metro. Approximately twenty-four percent of the energy generated by the plant is dedicated to powering the metro network, while the remaining portion supports the state's distribution companies and internal demand.

45. (B) Segregation → Combustion → Steam Generation → Turbine Rotation
Converting municipal solid waste into electricity involves a specific technical sequence to ensure efficiency. First, the waste must be segregated to remove non-combustible materials. The

Click Here to Buy book on Amazon

Next, the voltage is stepped down at distribution substations to be sent to local areas. Finally, the electricity reaches the individual consumer, where its usage is recorded by a consumer meter for billing purposes.

81. (C) Electricity Act, 2003
The unbundling of the Madhya Pradesh State Electricity Board was carried out in accordance with the Electricity Act of 2003. This landmark national legislation mandated the separation of integrated utility boards into specialized companies for generation, transmission, and distribution. The goal of this restructuring was to introduce greater competition, improve operational transparency, and enhance the overall financial health of the power sector.

82. (A) P-4, Q-1, R-2, S-3
In power management, several key concepts are used to describe grid operations. Peak load deficit refers to the shortfall when demand is at its maximum. Base load is the minimum demand level over a twenty-four-hour period. Smart grids integrate digital technology for better monitoring, and energy conservation focuses on reducing consumption through efficiency. These elements are all vital for maintaining a stable grid.

83. (B) I, II, IV, and V
The Renewable Energy Policy of Madhya Pradesh is designed to attract private investment through incentives like exemptions on electricity duty and single-window clearance. It also encourages modern technologies like pumped hydro storage to balance the grid. While it promotes solar parks, it does not strictly prohibit the use of all agricultural land, though it generally prioritizes non-fertile or wastelands for development.

84. (C) Provide continuous power to households and regulated power to the agricultural sector.
The separation of agricultural and non-agricultural feeders was a major infrastructure reform in Madhya Pradesh. This initiative allows the state to provide twenty-four-hour continuous power to rural households and industries while supplying regulated, high-quality power to farmers for irrigation. This targeted distribution ensures that the essential needs of both domestic consumers and the vital agricultural sector are met efficiently.

85. (C) A project generating up to 100 kW of power, usually for a local community.
A micro hydel project is a small-scale hydroelectric power facility typically designed to serve local communities or specific industries. These projects generally have a generation capacity of up to one hundred kilowatts. Because of their small size, they have minimal environmental impact and can be installed on minor streams or irrigation canals to provide decentralized electricity in remote rural areas.

86. (B) It is historically lower but is rapidly approaching the current national average.
Historically, the per capita power consumption in Madhya Pradesh was lower than the national average due to various socio-economic factors. However, with rapid industrialization, universal household electrification, and improved agricultural power supply, the state's consumption has seen significant growth. It is now steadily approaching the national average, reflecting the overall economic progress and increased access to electricity across the state.

87. (B) Indore
Indore, known for its focus on cleanliness and smart city initiatives, was a pioneer in installing solar-powered traffic signals. This move was part of the city's broader strategy to incorporate renewable energy into urban infrastructure and reduce the operational costs of public services. The use of solar power ensures that traffic management remains functional even during grid power outages or maintenance.

88. (B) Transmitting high-voltage electricity from generation plants to substations.
The Madhya Pradesh Power Transmission Company Limited is responsible for the high-voltage transmission of electricity across the state. It acts as the bridge between power generating stations and the regional distribution companies. By maintaining a vast network of transmission lines and substations, the company ensures that electricity is moved efficiently over long distances with minimal technical losses before reaching local areas.

NODIA

STUDYING FROM PDFs?

THINK AGAIN.

If you are studying only from PDFs,
you are wasting valuable time.

Research shows that learning from

PRINTED BOOKS has up to

4× HIGHER RETENTION

than studying from screens.

PRINT BOOK = BETTER MEMORY

PDF = LOWER RETENTION

Those who study from **PRINTED BOOKS**
move **AHEAD.**

Others are left **BEHIND**
in competition.

In competitive exams,
being average is not enough.

STAY ONE STEP AHEAD.

effective energy source for communities far from the main industrial centers.

55. (A) Dewas
The Jamgodrani wind energy farm is one of the most prominent and established wind power facilities in Madhya Pradesh, located in the Dewas district. The area's favorable wind conditions have made it a pioneer in the state's wind energy sector. Its successful operation has encouraged further investments in wind power across the Malwa region, contributing significantly to the state's green energy.

56. (A) P-4, Q-2, R-1, S-3
Major hydroelectric projects in Madhya Pradesh vary significantly in their power generation capacity. The Indira Sagar project is the largest at one thousand megawatts. Omkareshwar follows with five hundred and twenty megawatts. Gandhi Sagar provides one hundred and fifteen megawatts, while the Bargi project generates ninety megawatts. These figures highlight the critical contribution of the Narmada and Chambal rivers to the state's energy.

57. (A) Wastelands and marginal lands
The Jatropha cultivation initiative was strategically focused on utilizing wastelands and marginal lands that were not suitable for traditional agriculture. This approach ensures that energy crop production does not compete with food security. By growing Jatropha in these areas, the state aimed to produce sustainable biodiesel while simultaneously rehabilitating degraded lands and creating new economic opportunities for rural communities in Madhya Pradesh.

58. (A) Madhya Pradesh
Madhya Pradesh is exceptionally well-suited for solar energy production because it receives approximately three hundred days of clear sunlight annually. This high level of solar insolation makes the state an ideal location for mega solar projects and decentralized solar applications. The state government has leveraged this natural advantage by implementing favorable policies to attract large-scale investments in the solar sector.

59. (C) Agricultural residues such as mustard stalks, rice husk, and crop remains.
Biomass energy plants in Madhya Pradesh primarily utilize agricultural residues as their main source material. These include mustard stalks, rice husk, and other crop remains that are abundantly available after the harvest seasons. By converting these waste products into electricity, biomass plants provide an environmentally friendly disposal method while generating renewable power and offering farmers an additional source of income.

60. (B) It has a 151 MW capacity and was one of India's largest single-site plants at commissioning.
The Neemuch Solar Power Plant, also known as the Welspun Solar MP project, was a landmark in India's renewable energy journey. At the time of its commissioning, its one hundred and fifty-one megawatt capacity made it one of the largest single-site solar photovoltaic plants in the country. It demonstrated the technical and financial feasibility of large-scale solar power in the state.

NODIA

61. (C) Madhya Pradesh Power Management Company Limited
The Madhya Pradesh Power Management Company Limited serves as the holding company for the state's various power distribution and transmission companies. Headquartered in Jabalpur, it plays a central role in power procurement and the overall financial management of the state's electricity sector. This organizational structure was created to improve efficiency and coordinate the activities of the unbundled state electricity board.

62. (A) Khandwa
The district of Khandwa is associated with the ambitious proposed floating solar power plant on the Omkareshwar reservoir. With a planned capacity of six hundred megawatts, it is set to be one of the largest floating solar installations in the world. Utilizing reservoir surfaces for solar panels helps conserve land and reduces water evaporation, making it a highly efficient renewable energy.

to add four hundred megawatts to the state's capacity. However, it faced numerous financial and social hurdles that significantly delayed its completion and its full operational integration.

116. (D) Storing energy by pumping water to a high reservoir during off-peak power hours.
Pumped storage hydroelectricity is a method of storing large amounts of electrical energy. During off-peak hours when demand and prices are low, surplus electricity is used to pump water from a lower reservoir to a higher one. When demand increases during peak hours, this water is released back down through turbines to generate electricity, acting as a highly efficient grid-scale battery system.

117. (A) I, II, III, and V
The Energy Conservation Building Code in Madhya Pradesh is designed to ensure that new commercial buildings are constructed with high energy efficiency standards. It focuses on optimizing natural light, ventilation, and thermal insulation to reduce the need for artificial lighting and cooling. These regulations are vital for lowering the long-term energy demand of the rapidly growing urban and commercial sectors in the state.

118. (D) Madikheda Dam (Mohini Sagar)
The Madikheda Dam is built across the Sindh River in the Shivpuri district. While other dams like Rajghat and Barna are on different rivers, the Madikheda project is specifically designed to harness the waters of the Sindh for irrigation and power generation. Its reservoir, known as Mohini Sagar, is a major water source for the surrounding regions in northern Madhya Pradesh.

119. (A) IV, I, III, II
Producing biodiesel from Jatropha follows a logical chronological process starting with the harvesting of the mature plants. Next, the seeds are extracted from the harvested fruit. These seeds then undergo oil expelling to obtain the crude vegetable oil. Finally, the oil is processed through transesterification, a chemical reaction that converts it into high-quality biodiesel suitable for use in conventional diesel engines.

120. (A) Son
The Bansagar Hydroelectric Project is constructed on the Son River, a major southern tributary of the Ganges. The project is located in the Shahdol district and serves as a multipurpose venture for irrigation and power generation. The waters of the Son are shared among Madhya Pradesh, Uttar Pradesh, and Bihar, making it a critical regional resource for agriculture and energy.

121. (A) I, II, III, IV
The coal fields of Madhya Pradesh are distributed across the state's eastern and central regions. Moving from east to west, one first encounters the Singrauli coalfield, followed by the Sohagpur field in Shahdol. Continuing westward leads to the Pench-Kanhan area in Chhindwara, and finally to the Pathakhera fields in Betul district. This geographical distribution defines the locations of many major thermal power.

122. (D) Renewable Purchase Obligation (RPO)
The Renewable Purchase Obligation is a regulatory mechanism that mandates distribution companies to source a minimum percentage of their total electricity from renewable energy. This obligation ensures a guaranteed market for green energy producers and encourages the state's utilities to diversify their power portfolio. By meeting these targets, Madhya Pradesh moves closer to its long-term goals for environmental sustainability and carbon reduction.

123. (C) Providing a plug-and-play model with infrastructure for private solar developers.
Solar Parks are designed to simplify the development process for private investors by providing a plug-and-play model. The government identifies suitable land, handles environmental clearances, and builds the necessary transmission infrastructure to connect the site to the grid. This approach reduces the risks and time delays for developers, leading to the rapid and large-scale addition of solar power capacity.

124. (B) Determining the electricity tariff and regulating the power sector
The Madhya Pradesh Electricity Regulatory Commission is an independent body responsible for regulating the state's power sector. Its primary role is to determine the electricity tariffs that utilities can charge various categories

Downloaded from www.pdf.tube

this corridor makes it a major contributor to the state's renewable capacity.

72. (B) Capacity addition in thermal and renewable energy sectors
Madhya Pradesh's transition to a power-surplus state was primarily achieved through massive capacity additions. The state successfully commissioned several large-scale thermal power units while simultaneously aggressively promoting solar and wind energy projects. These efforts, combined with infrastructure upgrades, allowed the state to meet its internal peak demand and even export surplus electricity to other parts of the national grid.

73. (D) Madhya Pradesh does not have a dedicated solar energy policy.
Contrary to the idea that it lacks a policy, Madhya Pradesh has a very robust and dedicated solar energy policy. This policy provides various incentives and clear guidelines for solar developers, which has led to the establishment of mega-projects like the Rewa solar plant. The state also actively promotes solar pumps under the PM-KUSUM scheme and has pioneered innovative floating solar projects.

74. (C) Promoting star-labeled energy-efficient appliances
A primary objective of the Bureau of Energy Efficiency programs is to reduce overall energy consumption through improved efficiency. In Madhya Pradesh, this is achieved by promoting the use of star-labeled appliances, which consume significantly less electricity than non-rated versions. By encouraging consumers to adopt these efficient technologies, the state reduces the total demand on the grid and promotes sustainable energy habits.

75. (D) P-4, Q-3, R-2, S-1
Various energy organizations in Madhya Pradesh are headquartered or located in different cities. The MP Urja Vikas Nigam is in Bhopal, while the MP Power Management Company is based in Jabalpur. The NTPC Vindhyachal station is located in Singrauli, and the Satpura Thermal Power Station is situated in Sarni. These locations are central to the administrative and operational management of power.

76. (D) Waste management and renewable energy generation
Urban energy projects that utilize municipal solid waste are designed to solve two critical problems simultaneously. First, they provide an effective and hygienic method for waste disposal, reducing the burden on city landfills. Second, they convert this waste into useful electricity or fuel, contributing to the state's renewable energy goals. This dual purpose supports both environmental sustainability and urban infrastructure development.

77. (D) UJALA Scheme
The UJALA Scheme, which stands for Unnat Jyoti by Affordable LEDs for All, is the primary initiative for distributing energy-efficient LED bulbs at subsidized rates. In Madhya Pradesh, this scheme has been instrumental in reducing household energy bills and lowering the overall peak demand on the state's power grid. By replacing incandescent bulbs with LEDs, the state achieves significant energy savings.

78. (D) Jabalpur
The headquarters of the Madhya Pradesh Power Management Company Limited is located in Jabalpur. This city serves as the administrative nerve center for the state's power sector, as it also hosts the headquarters of the state transmission company and the eastern distribution company. The presence of these key organizations makes Jabalpur a critical hub for the management of the state's electricity.

NODIA

79. (B) Solar Photovoltaic - Grid-connected large scale power parks
Solar Photovoltaic technology is primarily used in Madhya Pradesh for establishing large-scale, grid-connected power parks like the one in Rewa. These parks generate massive amounts of electricity that are fed directly into the state and national grids. While other forms of renewable energy exist, the large-scale application of solar PV is a defining feature of the state's current green energy strategy.

80. (A) II, III, I, IV
The correct sequence of electricity flow starts at the generating station where power is produced. It then travels through the high-voltage transmission grid to reach different regions.

remaining organic and combustible waste is then burned to produce intense heat. This heat generates high-pressure steam, which ultimately rotates a turbine connected to an electrical generator, producing renewable energy for the local urban grid.

46. (A) I, II, III
Along the course of the Chambal River, the dams are arranged sequentially from upstream to downstream. The Gandhi Sagar Dam is the first and is located furthest upstream. It is followed by the Rana Pratap Sagar Dam and then the Jawahar Sagar Dam. This systematic development allows for the cascaded use of river water for multiple hydroelectric power generation cycles.

47. (B) Methane
Methane is the primary and most important component of the gas produced in rural biogas plants. Biogas is created through the anaerobic digestion of organic materials, such as cattle dung and agricultural waste. This methane-rich gas serves as an efficient and clean fuel for cooking and lighting in rural households, providing a sustainable energy alternative to traditional wood or fossil fuels.

48. (A) I, II, III, and V
Gas-based power generation in Madhya Pradesh is supported by the Hazira-Vijaipur-Jagdishpur pipeline and includes private projects like the Bhander Power Plant. These plants are often used to meet peak load demands due to their quick start-up times. While they produce lower emissions than coal, they currently account for only a small fraction of the state's total electricity output, not fifty percent.

49. (A) Both A and R are true and R is the correct explanation of A.
The Malwa region is the preferred location for wind energy farms because its unique topographical features provide high and consistent wind speeds. These conditions are necessary for the efficient operation of large-scale wind turbines. By harnessing these natural wind resources, the region has become a vital contributor to the state's renewable energy capacity, supporting a cleaner and more sustainable power matrix.

50. (C) P-3, Q-1, R-2, S-4
Rewa hosts the prominent Ultra Mega Solar project, while the Welspun solar project is located in Neemuch. The state's first major floating solar park is being developed at Omkareshwar in Khandwa district. Additionally, a large fifteen hundred megawatt solar park is proposed across the Shajapur, Agar, and Neemuch districts, reflecting the state's commitment to expanding its renewable energy generation infrastructure.

51. (B) II, III and IV
Small and micro hydel projects are typically built on minor rivers or irrigation canals and do not require large reservoirs or cause significant human displacement. They offer the benefit of localized power generation, which helps in reducing transmission losses. In Madhya Pradesh, the Urja Vikas Nigam acts as the nodal agency responsible for promoting and developing these sustainable energy initiatives.

52. (D) Datia
The Bhander Power Plant, a significant gas-based power generation facility, is located in the Datia district of Madhya Pradesh. Operated by the private sector, it adds diversity to the state's power generation mix, which is otherwise dominated by coal. The plant's location allows it to access gas supplies through national pipeline networks, providing a cleaner alternative for electricity production.

53. (C) Gurh
The Rewa Ultra Mega Solar Power Project is situated in the Gurh tehsil of the Rewa district. Spanning over fifteen hundred hectares of land, this massive solar park has transformed the local landscape into a global hub for renewable energy. The site was selected due to its vast available area and high solar radiation, which are ideal for large-scale photovoltaic power generation.

54. (C) Rural households for cooking fuel and lighting
The Biogas rural energy programme is specifically designed to provide sustainable and clean energy solutions to rural households. By utilizing locally available organic waste, such as cattle dung, it produces gas for cooking and lighting. This reduces the dependency on traditional firewood, improves indoor air quality, and provides a cost-

Click Here to Buy book on Amazon

89. (B) Wind power generation is highly intermittent and seasonal compared to thermal power.
A significant disadvantage of wind power is its intermittent nature, as electricity can only be generated when wind speeds are within a specific range. In Madhya Pradesh, wind speeds also vary seasonally, meaning generation peaks during certain months and drops during others. This variability makes it more challenging to manage compared to thermal power, which can provide a constant and reliable base load.

90. (A) Advanced Metering Infrastructure (Smart Meters)
Advanced Metering Infrastructure, commonly known as smart meters, is the fundamental technology required for implementing a Smart Grid. These meters allow for two-way communication between the utility and the consumer, providing real-time data on power usage. This technology enables better demand response, more accurate billing, and faster detection of power outages or theft, significantly improving the overall efficiency of the grid.

91. (B) Khandwa
The Shri Singaji Thermal Power Project is a major state-owned coal-fired power plant located in the Khandwa district. It was established to meet the growing energy demands of the state and utilizes modern super-critical technology for higher efficiency. Its location near the Indira Sagar reservoir ensures an adequate water supply, which is a critical requirement for large-scale thermal power generation.

92. (C) Direct grid integration for municipal electricity consumption in local areas.
Energy generated from the incineration of municipal solid waste is primarily fed directly into the local electricity grid. This power is then used to meet the energy needs of municipal services or local residential and commercial areas. By integrating this renewable energy into the grid, the state reduces its reliance on fossil fuels while simultaneously managing urban waste in an environmentally sustainable.

93. (C) Rewa → Sidhi → Singrauli
Traveling from the site of the largest solar plant in Rewa to the largest thermal plant in Singrauli involves moving eastward. A traveler would pass through Sidhi district before reaching Singrauli. This route highlights the transition from the state's modern renewable energy hubs to the traditional coal-rich regions that have historically served as the backbone of the central Indian power generation sector.

NODIA

94. (C) Installing smart meters and conducting energy audits
To reduce Aggregate Technical and Commercial losses, the Madhya Pradesh government has focused on modernizing its power distribution infrastructure. Key initiatives include the installation of smart meters to prevent theft and ensure accurate billing, as well as conducting regular energy audits to identify technical leakages. These measures improve the financial health of distribution companies and ensure a more transparent power system.

95. (B) Bansagar Project - MP and Chhattisgarh
The Bansagar Hydroelectric Project is actually a joint venture between Madhya Pradesh, Uttar Pradesh, and Bihar, rather than Chhattisgarh. Other interstate projects like the Rajghat project on the Betwa river with Uttar Pradesh, and the Gandhi Sagar project with Rajasthan, are correctly matched. These joint ventures are essential for sharing water resources and power generation benefits across different regional borders.

96. (B) Secondary energy sources derived from coal
Coke and coal gas are categorized as secondary energy sources because they are produced through the industrial processing of coal. In a process called destructive distillation, coal is heated in the absence of air to yield these by-products. Coke is primarily used in the steel industry as a fuel and reducing agent, while coal gas served as a historical source for lighting.

97. (B) Around 20-25%
Renewable energy sources, excluding large hydroelectric projects, currently contribute approximately twenty to twenty-five percent of Madhya Pradesh's total installed power capacity. This significant share is the result of rapid growth in the solar and wind sectors over the past decade. The state continues to expand its green energy portfolio to meet sustainability goals and reduce its long-term reliance on coal-based generation.

98. (A) P-4, Q-3, R-2, S-1
Hydroelectric projects in Madhya Pradesh are located on several major rivers. The Rajghat project is on the Betwa, while the Pench project is on the Pench river. The Tons project is situated on the Tons river, and the Maheshwar project is on the Narmada. Each of these rivers provides the necessary water flow and topographical conditions required for sustainable hydroelectric energy.

99. (B) Madhya Pradesh State Mining Corporation
While the Madhya Pradesh State Mining Corporation is involved in extracting minerals like coal, it is not primarily a power sector utility company. In contrast, the other three entities are directly responsible for the generation, transmission, and management of electricity within the state's power network. This makes the mining corporation an exception when categorizing organizations based on their core function in the energy.

100. (C) It promotes standalone solar agriculture pumps and solarizing grid-connected pumps.
The PM-KUSUM scheme is being implemented in Madhya Pradesh to promote the solarization of the agricultural sector. It provides financial assistance to farmers for installing standalone solar-powered pumps and for solarizing existing grid-connected pumps. This initiative helps farmers reduce their dependence on diesel, lowers their electricity bills, and allows them to sell surplus solar power back to the state-owned grid.

101. (A) Bureau of Energy Efficiency (BEE)
The Bureau of Energy Efficiency is the central government agency responsible for the star labeling program for electrical appliances. These star ratings help consumers in Madhya Pradesh identify the most energy-efficient products, such as air conditioners, refrigerators, and fans. By setting these standards, the BEE encourages manufacturers to improve product efficiency and helps reduce overall electricity consumption across the entire country.

102. (A) Yes, several projects have been proposed to stabilize the grid using renewables.
Madhya Pradesh has significant potential for pumped storage hydroelectricity, and several projects have been proposed to leverage this. These systems act like massive batteries, storing energy by pumping water to a higher reservoir during times of low demand and releasing it to generate power during peaks. This technology is vital for stabilizing the grid as more variable solar and wind energy are integrated.

103. (B) 400 MW
The Maheshwar Hydroelectric Project, located on the Narmada River in the Khargone district, was designed with a proposed capacity of four hundred megawatts. Although it has faced various delays and challenges, it was intended to be a significant addition to the state's renewable energy capacity. The project illustrates the complexities involved in developing large-scale hydroelectric infrastructure in environmentally and socially sensitive areas.

104. (D) MP, UP, and Bihar
The Bansagar Hydroelectric Project is a significant multipurpose initiative located on the Son River. It was developed as a joint venture involving the states of Madhya Pradesh, Uttar Pradesh, and Bihar. The water stored and the power generated are shared among these three states according to a predefined agreement, supporting extensive irrigation and energy requirements across the entire regional river basin.

105. (C) Kisan Urja Suraksha evam Utthaan Mahabhiyan (KUSUM)
The PM-KUSUM scheme specifically emphasizes increasing the energy efficiency of the agricultural sector. In addition to promoting solar pumps, the scheme encourages farmers to replace old, inefficient pumpsets with modern, energy-efficient ones. By reducing the electricity required for irrigation, the program helps in conserving energy, lowering costs for farmers, and improving the overall sustainability of agricultural practices in Madhya Pradesh.

106. (A) I, II and IV
In Madhya Pradesh's power system, coal-based plants provide the steady base load while hydroelectric projects are often utilized to meet sudden peak load demands. Wind power generation is naturally seasonal, varying with weather patterns. However, solar power is only generated during daylight hours and

Downloaded from www.pdf.tube

does not provide output at night unless paired with expensive energy storage systems, making constant night generation incorrect.

107. (A) Aggregate Technical and Commercial losses
The term AT&C losses refers to Aggregate Technical and Commercial losses, which represent the difference between the energy supplied to a distribution area and the energy for which payment is actually received. These losses occur due to technical factors like resistance in wires and commercial factors such as electricity theft, faulty meters, or poor collection of bills from the various consumers.

108. (A) Indira Sagar
The Shri Singaji Thermal Power Project draws its operational water primarily from the vast reservoir of the Indira Sagar Dam. Thermal plants require massive amounts of water for cooling their condensers and for producing the high-pressure steam that drives the turbines. The proximity to this large water body ensures that the Singaji station can operate continuously at its high generation capacity.

109. (D) It utilizes locally abundant cattle dung and agricultural waste.
Biogas is a highly suitable energy solution for rural Madhya Pradesh because it relies on locally abundant and free raw materials like cattle dung and agricultural residues. This decentralized energy source allows rural families to be self-sufficient for their basic cooking and lighting needs. It also provides a clean alternative to burning wood, thereby reducing deforestation and improving the health of rural women.

110. (B) 425 MW
The total installed capacity of the multiple powerhouses associated with the Bansagar project is four hundred and twenty-five megawatts. These powerhouses utilize the water from the Bansagar dam to generate electricity, which is then distributed to the participating states of Madhya Pradesh, Uttar Pradesh, and Bihar. This project is a major contributor to the renewable energy profile of the eastern region.

111. (D) They monitor grid operations to balance power generation and demand in real-time.
Load Dispatch Centers are critical facilities that monitor the entire electrical grid in real-time. Their primary role is to ensure that the total electricity generated matches the current demand across the state. By managing this delicate balance, they prevent grid instability, minimize outages, and ensure the efficient distribution of power from various thermal, hydro, and renewable sources to all sectors.

112. (B) Korba Super Thermal Power Plant
The Korba Super Thermal Power Plant is a major facility, but it is located in the neighboring state of Chhattisgarh, not in Madhya Pradesh. The other three plants mentioned—Shri Singaji, Amarkantak, and Sanjay Gandhi—are all key functional thermal power stations located within the geographical boundaries of Madhya Pradesh and are operated by either state or central power generation companies.

NODIA

113. (B) 60 MW
The Madikheda Dam, also known as the Mohini Sagar project, features a hydroelectric powerhouse with an installed capacity of sixty megawatts. Built on the Sindh River in the Shivpuri district, this project provides both irrigation and renewable energy. It is a key piece of infrastructure in the northern part of the state, contributing to the local grid and supporting regional development.

114. (B) Transmission losses decrease
In an electrical grid, increasing the transmission voltage allows for the same amount of power to be delivered at a lower current. Since energy loss in wires is proportional to the square of the current, higher voltages significantly reduce the technical losses that occur during long-distance transmission. This is why the state uses high-voltage lines to move power from large generating stations.

115. (D) It was originally conceived as India's first privately financed hydroelectric project.
The Maheshwar Hydroelectric Project holds historical significance as it was originally planned as India's first major hydroelectric project to be financed and developed by the private sector. Located on the Narmada River, the project aimed

63. (A) Electrification of all willing un-electrified households
The Saubhagya Scheme, also known as the Pradhan Mantri Sahaj Bijli Har Ghar Yojana, was launched to ensure universal household electrification. In Madhya Pradesh, the scheme focused on providing electricity connections to all willing un-electrified households in both rural and urban areas. This initiative has been crucial in improving the quality of life and providing basic modern amenities to the population.

64. (A) Both A and R are true and R is the correct explanation of A.
The rapid increase in the share of renewable energy in Madhya Pradesh's total power matrix is a direct result of proactive government interventions. By offering favorable policies, efficient land allocation processes, and single-window clearances, the state has successfully attracted significant private investment. These development measures have simplified the creation of solar and wind projects, accelerating the state's transition toward green energy.

65. (A) MP Urja Vikas Nigam Limited
MP Urja Vikas Nigam Limited is the designated nodal agency for implementing energy conservation initiatives and renewable energy projects in the state. It works in close coordination with the Bureau of Energy Efficiency to promote energy-efficient practices across various sectors. The organization is responsible for conducting energy audits, promoting star-rated appliances, and raising awareness about the importance of sustainable energy.

66. (B) 1950
The Madhya Pradesh State Electricity Board was originally established in 1950, making it the first state electricity board in India. It was created to oversee the generation, transmission, and distribution of electricity across the state. Although it was later unbundled into separate companies in 2003, its establishment marked a historic milestone in the structured development of India's regional power infrastructure.

67. (C) Indore
Indore has been a leader in urban waste management and was among the first cities in Madhya Pradesh to successfully install a Bio-CNG plant. This facility processes municipal solid waste to produce clean Bio-CNG, which is used to fuel city buses. This project serves as a model for sustainable urban development by combining waste disposal with the production of renewable fuel.

68. (B) Improve the operational and financial turnaround of power distribution companies.
The Ujwal DISCOM Assurance Yojana was adopted by Madhya Pradesh to address the financial and operational challenges faced by state power distribution companies. The scheme aims to reduce the debt burden of DISCOMs, improve their operational efficiency, and lower the cost of power. By achieving a financial turnaround, the state ensures a more stable and reliable electricity supply for all consumers.

69. (A) I and II
The Deen Dayal Upadhyaya Gram Jyoti Yojana is a flagship central scheme implemented in Madhya Pradesh to strengthen rural power infrastructure. Key objectives include the separation of agricultural and non-agricultural feeders to provide better power management and the augmentation of sub-transmission networks. While it improves rural energy access, it does not aim to replace all thermal plants with solar power.

70. (D) Dakshin Kshetra Vidyut Vitaran Company
Madhya Pradesh has three primary state-owned power distribution companies organized by geographical zones. These include the Madhya Kshetra, Paschim Kshetra, and Poorv Kshetra Vidyut Vitaran companies, which handle central, western, and eastern regions respectively. There is no official entity named the Dakshin Kshetra Vidyut Vitaran Company within the state's power sector organizational structure, making it the odd one out.

71. (A) Indore, Dewas, Ujjain
The districts of Indore, Dewas, and Ujjain form the primary wind energy corridor of Madhya Pradesh due to their location on the Malwa plateau. This region experiences the most favorable wind speeds in the state, attracting numerous private developers to set up wind farms. The concentration of wind turbines in

Click Here to Buy book on Amazon

of consumers. The commission ensures a fair balance between the financial viability of power companies and the interests of the public, while also overseeing service quality and compliance.

125. (C) Fly Ash
Fly ash is a fine particulate by-product generated in large quantities during the combustion of coal in thermal power plants. In Singrauli, managing this ash is a major environmental challenge, requiring the construction of massive ash dykes to prevent soil and water contamination. The state and central power companies are increasingly looking for ways to recycle fly ash into construction materials like bricks.

126. (A) P-4, Q-3, R-2, S-1
The generation capacities of various power projects in Madhya Pradesh are distinct. The Rewa solar plant has a capacity of seven hundred and fifty megawatts, while the Omkareshwar hydro project generates five hundred and twenty megawatts. The Gandhi Sagar and Bargi hydroelectric projects have capacities of one hundred and fifteen and ninety megawatts respectively. These values reflect the scale of each project's energy contribution.

127. (B) Decrease in the water storage capacity and reduced power generation lifespan.
Siltation occurs when river sediments settle at the bottom of a dam's reservoir, gradually reducing its total volume. Over time, this leads to a significant decrease in water storage capacity, which limits the amount of water available for hydroelectric generation, especially during the dry season. Ultimately, excessive siltation can significantly shorten the effective operational lifespan and economic viability of a power.

128. (D) Photovoltaic cells
Steam, hydro, and wind turbines all rely on the mechanical rotation of a generator to produce electricity. They convert kinetic or thermal energy into mechanical energy first. In contrast, photovoltaic cells generate electricity directly from sunlight using the photoelectric effect, without any moving parts. This fundamental technological difference distinguishes solar PV from traditional and other renewable mechanical power generation methods used in the state.

129. (B) It allows consumers to feed surplus solar energy to the grid and get credit for it.
Net metering is a billing mechanism that allows owners of rooftop solar panels to export their surplus electricity to the state-owned power grid. The energy sent to the grid is subtracted from the energy consumed from the grid, and the consumer is only billed for the net usage. This provides a strong financial incentive for individuals and businesses to invest in solar.

130. (A) Infrastructure to evacuate renewable energy to the national grid.
The Green Energy Corridor is a specialized infrastructure project designed to facilitate the integration of large-scale renewable energy into the power grid. It involves the construction of transmission lines and substations that specifically evacuate electricity from solar and wind farms to the national grid. This ensures that the variable power generated from green sources is distributed efficiently without causing grid instability.

www.nodia.in

Downloaded from www.pdf.tube

(B) Rewa
(C) Sagar
(D) Damoh

60. The Security Paper Mill, which produces paper for currency notes, is located in which city of Madhya Pradesh?
(A) Dewas
(B) Narmadapuram
(C) Nepanagar
(D) Ratlam

61. What is the primary objective of establishing Special Economic Zones (SEZs) in Madhya Pradesh?
(A) To strictly isolate foreign tourists from the local population centers
(B) To create zones where the administrative laws of the state do not apply
(C) Promoting exports and investment through targeted tax incentives
(D) To relocate all agricultural activities into modern controlled environments

62. In which year was a separate Micro, Small and Medium Enterprises (MSME) Department established by the Government of Madhya Pradesh to dedicatedly foster the sector?
(A) 2016
(B) 2005
(C) 2010
(D) 2022

63. Find the odd one out in the context of major industries established in the Malanpur industrial area.
(A) Heavy shipbuilding
(B) Defence hardware
(C) Automobile components
(D) Food processing

64. Match List-I (Industrial Product) with List-II (Manufacturing Centre) and select the correct answer.
List-I: (Industrial Product)
P. Umbrellas
Q. Clocks/Watches
R. Bicycles
S. Biscuits
List-II: (Manufacturing Centre)
1. Gwalior
2. Guna
3. Mhow
4. Betul
(A) P-3, Q-4, R-2, S-1
(B) P-4, Q-3, R-1, S-2
(C) P-3, Q-2, R-4, S-1
(D) P-1, Q-4, R-2, S-3

65. Which industrial area in the Gwalior region was developed to act as an industrial counter-magnet and is home to multiple multinational corporations?
(A) Malanpur
(B) Pithampur
(C) Mandideep
(D) Meghnagar

66. Identify the incorrect statement regarding the industrial corridors planned in Madhya Pradesh.
(A) The state relies solely on coastal shipping routes for its industrial corridors
(B) The Bhopal-Bina industrial corridor focuses on chemical and engineering units
(C) The Indore-Pithampur corridor is heavily focused on automobiles and IT
(D) The state's landlocked nature requires strong reliance on road and rail corridors

67. Which of the following districts is notable for granite cutting and polishing units due to local geological formations?
(A) Jhabua and Dhar
(B) Khargone and Barwani
(C) Datia and Chhatarpur
(D) Ujjain and Ratlam

68. Which state institution serves as the single-window nodal agency for investment promotion and facilitation in Madhya Pradesh?
(A) Madhya Pradesh State Mining and Resource Development Corporation
(B) MP Trade and Investment Facilitation Corporation (TRIFAC)
(C) Madhya Pradesh Finance and Industrial Credit Corporation
(D) Madhya Pradesh Road and Infrastructure Development Corporation

NODIA

69. Which of the following is not a major component of the Madhya Pradesh MSME Development Policy?

(A) Indore is a major centre for the production of pumps and motors
(B) Bhopal lacks any significant heavy engineering units
(C) Agricultural implements manufacturing is widespread in the Malwa region
(D) Pithampur houses numerous light and heavy engineering ancillary units

10. Find the odd one out among the following traditional textile centres in Madhya Pradesh.
(A) Chanderi
(B) Maheshwar
(C) Mandideep
(D) Bagh

11. Which industrial cluster in Madhya Pradesh is widely known as the "Detroit of Madhya Pradesh" due to its automobile industry concentration?
(A) Malanpur
(B) Mandideep
(C) Meghnagar
(D) Pithampur

12. The first cotton textile mill in Madhya Pradesh was established in 1906. In which of the following cities was it located?
(A) Indore
(B) Gwalior
(C) Burhanpur
(D) Ujjain

13. The first cement plant in Madhya Pradesh was set up in 1922 at Banmore. In which district is Banmore located?
(A) Morena
(B) Katni
(C) Satna
(D) Damoh

14. Which of the following best describes the core characteristic of a traditional Maheshwari saree?
(A) Heavy silk with intricate gold embroidery and mirror work
(B) Woollen fabric designed for extreme winter conditions
(C) Pure cotton base with reversible borders known as bugdi
(D) Synthetic blend with digitally printed tribal motifs

15. The Gun Carriage Factory (GCF) in Madhya Pradesh was established in the year 1904. Where is it located?
(A) Mhow
(B) Gwalior
(C) Sagar
(D) Jabalpur

16. What is the primary role of the industrial sector in the economy of Madhya Pradesh?
(A) It absorbs surplus agricultural labour through heavy industries and MSMEs
(B) It contributes more than fifty percent to the total Gross State Domestic Product
(C) It serves as the sole contributor to the foreign exchange reserves for the state
(D) It restricts foreign direct investment to promote and protect local cottage industries

17. What is the primary product portfolio of the BHEL unit located in Bhopal?
(A) Heavy electrical equipment like switchgears, transformers, and motors
(B) Mass-market passenger automobiles and diverse light commercial vehicles
(C) Complex chemical fertilisers and various downstream petrochemical products
(D) Mainframe computers and advanced integrated software processing chips

18. What is the socio-economic significance of the handloom industry in Madhya Pradesh?
(A) It provides rural employment while preserving traditional weaving heritage
(B) It is highly capital-intensive and employs very few technically skilled engineers
(C) It requires heavy machinery imported primarily from developed European countries
(D) It is restricted by law to only produce goods meant for official government use

19. Which of the following represents the correct sequence of districts in terms of descending concentration of cement manufacturing units in Madhya Pradesh?
(A) Satna, Damoh, Katni, Morena
(B) Morena, Damoh, Katni, Satna
(C) Katni, Satna, Morena, Damoh
(D) Damoh, Morena, Satna, Katni

Click Here to Buy book on Amazon

(D) To facilitate customs clearance and handle regional export-import cargo

78. Which was the first greenfield SEZ of Madhya Pradesh, established specifically to boost the manufacturing and export sectors?
(A) Crystal IT Park, Indore
(B) Mandideep SEZ, Raisen
(C) Malanpur SEZ, Bhind
(D) Pithampur SEZ, Dhar

79. Which of the following represents the correct sequence of forest products in Madhya Pradesh by their estimated volume of industrial utilization and revenue generation (from highest to lowest)?
(A) Tendu leaves, Bamboo, Timber, Sal seeds
(B) Timber, Tendu leaves, Bamboo, Sal seeds
(C) Bamboo, Sal seeds, Tendu leaves, Timber
(D) Timber, Bamboo, Sal seeds, Tendu leaves

80. The optical fibre factory established in Mandideep was set up with the technological collaboration of which country?
(A) Germany
(B) South Korea
(C) United States of America
(D) Japan

81. Which industrial cluster in the Jhabua district is known for its tribal workforce and rock phosphate based industries?
(A) Maneri
(B) Borgaon
(C) Meghnagar
(D) Purena

82. Identify the incorrect pair of a handicraft and its associated region in Madhya Pradesh.
(A) Papier-mâché art - Burhanpur
(B) Bagh Prints - Dhar
(C) Bell Metal Art - Datia/Tikamgarh
(D) Nandna Prints - Neemuch

83. The "Super Corridor" is a major infrastructure and real estate development zone explicitly designed to attract IT and corporate investments. It connects which two prominent regions?
(A) Bhopal and the Mandideep industrial region
(B) Gwalior and the Malanpur industrial sector
(C) Jabalpur and the Katni limestone corridor
(D) Indore and the local airport

84. The dry port located in Pithampur is technically known as:
(A) Marine Export Processing Zone (MEPZ)
(B) Special Riverine Port (SRP)
(C) Inland Container Depot (ICD)
(D) Free Trade Warehousing Zone (FTWZ)

NODIA

85. The 'Magnificent MP' or 'Global Investors Summit' is typically held in which city to showcase the industrial investment climate of the state?
(A) Bhopal
(B) Gwalior
(C) Indore
(D) Jabalpur

86. What is the name of the state-owned emporium chain that markets handicrafts and handlooms produced by artisans of Madhya Pradesh?
(A) Vindhya Valley
(B) Mrignayani
(C) Shilpgram
(D) Hastkala

87. The industrial estate of Kirnapur, designed to boost local entrepreneurship, is located in which district?
(A) Mandla
(B) Balaghat
(C) Dindori
(D) Seoni

88. Read the following statements regarding the DMIC nodes in Madhya Pradesh:
I. Pithampur-Dhar-Mhow is identified as an investment node under DMIC.
II. Neemuch-Nayagaon is proposed as a distinct industrial area.
III. Bhopal is the central administrative headquarters for the entire DMIC project in India.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II and III

29. Mandideep is a prominent industrial area known for steel and allied industries. In which district is it situated?
(A) Bhopal
(B) Sehore
(C) Raisen
(D) Vidisha

30. Which district in Madhya Pradesh is home to the first sugar mill established in 1934?
(A) Sehore
(B) Narsinghpur
(C) Gwalior
(D) Ratlam

31. Which of the following statements best describes the growth of the IT industry in Bhopal?
(A) It is dominated entirely by hardware manufacturing with no software presence
(B) IT operations have been banned in Bhopal to protect the local environment
(C) IT parks support software development, BPOs, and startup incubation
(D) Bhopal serves exclusively as a raw material supplier for industries in Bangalore

32. The bidi manufacturing industry in Madhya Pradesh is fundamentally dependent on the collection of which minor forest produce?
(A) Sal seeds
(B) Tendu leaves
(C) Mahua flowers
(D) Bamboo

33. The National Automotive Test Tracks (NATRAX), one of the longest high-speed tracks in Asia, is located in which industrial area of Madhya Pradesh?
(A) Malanpur
(B) Pithampur
(C) Mandideep
(D) Borgaon

34. Read the following statements regarding the food processing sector in Madhya Pradesh:
I. The state has established mega food parks to reduce agricultural wastage.
II. Indus Mega Food Park is located in Khargone.
III. Avantika Mega Food Park is situated in Dewas.
IV. Dalmoth and Namkeen manufacturing is a major agro-based MSME activity in Ratlam.
V. The sector relies heavily on imported maritime fish resources.
Which of the above statement(s) is/are correct?
(A) I, II, III and IV only
(B) II, III, IV and V only
(C) I, III, IV and V only
(D) I, II, IV and V only

35. Nepanagar is historically significant at the national level for the production of which commodity?
(A) Newsprint paper
(B) Ordnance ammunition
(C) Heavy machinery
(D) Synthetic rubber

36. Identify the correct pair regarding industrial parks in Madhya Pradesh.
(A) Plastic Park - Tamot
(B) Spice Park - Pithampur
(C) IT Park - Borgaon
(D) Apparel Park - Mandideep

37. Pithampur falls under the administrative jurisdiction of which district?
(A) Dhar
(B) Indore
(C) Ujjain
(D) Dewas

38. The Orient Paper Mill in Madhya Pradesh is located at Amlai. Amlai is situated in which district?
(A) Anuppur
(B) Umaria
(C) Singrauli
(D) Shahdol

39. Madhya Pradesh is recognized as the leading state in India for the processing and production of which agricultural crop?
(A) Sugarcane
(B) Jute
(C) Tea
(D) Soybean

40. The Bina Refinery, a significant petrochemical project in Madhya Pradesh, was set up as a joint

Downloaded from www.pdf.tube

CHAPTER 15
Industries

1. Read the following statements regarding the man-made fibre industry in Madhya Pradesh:
I. Nagda is a major centre for the production of artificial silk and viscose staple fibre.
II. The synthetic textile industry in the state relies entirely on imported finished yarn.
Which of the above statement(s) is/are correct?
(A) I only
(B) II only
(C) Both I and II
(D) Neither I nor II

2. Which of the following pairs of Cement Plant and Location is incorrect?
(A) ACC Cement - Kymore
(B) Prism Cement - Satna
(C) Diamond Cement - Indore
(D) Birla Jute Cement - Maihar

3. Which of the following is not a stated objective of the Madhya Pradesh Industrial Promotion Policy?
(A) Achieving inclusive growth through large-scale employment generation
(B) Promoting balanced regional development across all administrative districts
(C) Nationalising all private manufacturing units within the state
(D) Enhancing the ease of doing business to attract significant global investments

4. Given below are two statements, one labeled as Assertion (A) and the other as Reason (R).
Assertion (A): The establishment of BHEL in Bhopal led to the development of the Govindpura industrial area.
Reason (R): Heavy industries typically create demand for various ancillary units that supply components and services.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

5. Maheshwari sarees trace their origin to the patronage of which prominent historical figure of Madhya Pradesh?
(A) Rani Durgavati
(B) Rani Ahilyabai Holkar
(C) Begum Sikandar Jahan
(D) Rani Avanti Bai

6. Which of the following is not an ordnance factory located in the Jabalpur district?
(A) Ordnance Factory Khamaria
(B) Security Paper Mill
(C) Vehicle Factory Jabalpur
(D) Grey Iron Foundry

7. Which of the following best describes the historical growth pattern of industries in Madhya Pradesh prior to the economic reforms of 1991?
(A) Dominated by high-tech electronics, software services, and digital innovation hubs
(B) Based primarily on agro-based, forest-based, and mineral-based units
(C) Highly concentrated in eastern tribal districts due to significant transport subsidies
(D) Driven almost exclusively by coastal export processing zones and maritime trade

NODIA

8. The location of cement plants in Madhya Pradesh is primarily dictated by the availability of which crucial raw material?
(A) Bauxite
(B) Limestone
(C) Iron Ore
(D) Copper

9. Identify the incorrect statement regarding the engineering and machine tools industry in Madhya Pradesh.

private entities in the state

49. What is a key socio-economic dimension of the bidi industry in Madhya Pradesh?
(A) It provides supplementary income and employment for rural populations
(B) It requires highly specialized and technically skilled engineering graduates
(C) It is entirely automated and sophisticated, requiring zero manual labour
(D) It is only operational within the major urban centres of Bhopal and Indore

50. Consider the following paper-related industrial units in Madhya Pradesh:
1. Bank Note Press
2. Security Paper Mill
3. National Newsprint and Paper Mills
4. Orient Paper Mill

Which of the following represents the correct sequence of these units based on their locations from North to South geographically?
(A) 4, 1, 2, 3
(B) 1, 4, 2, 3
(C) 4, 2, 1, 3
(D) 2, 1, 3, 4

51. Which region in Madhya Pradesh is highly prominent for stone quarrying, particularly marble processing?
(A) Pachmarhi in Narmadapuram
(B) Amarkantak in Anuppur
(C) Mandu in Dhar
(D) Bhedaghat in Jabalpur

52. Which city has emerged as the primary pharmaceutical hub of Madhya Pradesh?
(A) Rewa
(B) Katni
(C) Guna
(D) Indore

53. Where is the major plant of the Indian Farmers Fertiliser Cooperative (IFFCO) proposed or operating in Madhya Pradesh to support local agriculture?
(A) Mandla
(B) Jhabua
(C) Sehore
(D) Khargone

54. The largest soybean extraction plant in Asia is located in which city of Madhya Pradesh?
(A) Indore
(B) Dewas
(C) Ujjain
(D) Sehore

55. The glass industry in Madhya Pradesh is primarily concentrated in areas bordering Uttar Pradesh due to the influence of which famous glass-producing city?
(A) Firozabad
(B) Kanpur
(C) Moradabad
(D) Varanasi

56. Crystal IT Park, the first functioning IT SEZ of Madhya Pradesh, was established in which city?
(A) Indore
(B) Bhopal
(C) Jabalpur
(D) Gwalior

57. Which city is famous for its Vanaspati Ghee industry, hosting a major plant at Ganj Basoda?
(A) Vidisha
(B) Raisen
(C) Guna
(D) Ashoknagar

58. Read the following statements regarding the pharmaceutical sector in Madhya Pradesh:
I. Indore and Pithampur contain Special Economic Zones dedicated to pharmaceuticals.
II. The sector focuses exclusively on traditional Ayurvedic medicines.
III. Dewas is a supporting cluster for pharmaceutical packaging and production.
IV. State policies offer specific capital subsidies for setting up active pharmaceutical ingredient (API) units.

Which of the above statement(s) is/are correct?
(A) I, II and III only
(B) I, III and IV only
(C) II, III and IV only
(D) I, II, III and IV

59. Which district is considered the largest centre for bidi production in Madhya Pradesh?
(A) Jabalpur

Click Here to Buy book on Amazon

venture with a petroleum company from which country?
(A) Saudi Arabia
(B) Russia
(C) United Arab Emirates
(D) Oman

41. Match List-I (Mineral-based Industry) with List-II (Primary Location) and select the correct answer.
List-I: (Mineral-based Industry)
P. Slate Pencil Industry
Q. Diamond Polishing
R. Copper Smelting
S. Coal Bed Methane Extraction
List-II: (Primary Location)
1. Malanjkhand
2. Mandsaur
3. Shahdol
4. Panna
(A) P-2, Q-4, R-1, S-3
(B) P-4, Q-2, R-3, S-1
(C) P-2, Q-1, R-4, S-3
(D) P-1, Q-3, R-2, S-4

42. Match List-I (Industrial Complex) with List-II (Location) and select the correct answer.
List-I: (Industrial Complex)
P. Electronic Complex
Q. Leather Complex
R. Stainless Steel Complex
S. Agro Complex
List-II: (Location)
1. Dewas
2. Chhindwara
3. Sagar
4. Indore
(A) P-4, Q-1, R-3, S-2
(B) P-1, Q-4, R-2, S-3
(C) P-4, Q-3, R-1, S-2
(D) P-3, Q-1, R-4, S-2

43. Which two districts in Madhya Pradesh have a notable concentration of glass manufacturing units?
(A) Jhabua and Alirajpur
(B) Gwalior and Morena
(C) Chhindwara and Seoni
(D) Mandla and Dindori

NODIA

44. In which district of Madhya Pradesh is Nepanagar situated?
(A) Hoshangabad
(B) Khandwa
(C) Betul
(D) Burhanpur

45. The leather complex in Madhya Pradesh, designated to promote tanning and footwear units, is established in:
(A) Indore
(B) Gwalior
(C) Dewas
(D) Chhatarpur

46. Which of the following is an expected cause and effect relationship resulting from the growth of the automobile industry in Pithampur?
(A) Increase in automobile plants leads to the complete decline of local MSMEs
(B) OEM growth creates a robust ecosystem of auto-ancillary manufacturing
(C) Automobile manufacturing completely replaces the agricultural sector in the district
(D) Expansion of Pithampur leads to the immediate relocation of BHEL from Bhopal

47. Why has the Malwa plateau become the central hub for the soybean processing industry?
(A) Because of the availability of dense tropical evergreen forests
(B) Due to the presence of black cotton soil which is highly suitable for soybean cultivation
(C) Because it receives the highest rainfall in the state
(D) Because the central government mandated all plants to be built there irrespective of crop yield

48. Identify the incorrect statement regarding the chemical and fertiliser industry in Madhya Pradesh.
(A) National Fertilizers Limited operates a major plant at Vijaipur in Guna district
(B) The state is devoid of any petrochemical processing units
(C) The Vijaipur fertiliser plant utilizes natural gas from the Hazira-Vijaipur-Jagdishpur (HVJ) pipeline
(D) Phosphatic fertilisers are produced by

(A) Exemption from all central direct taxes permanently
(B) Provision of interest subsidy on long-term loans
(C) Partial or full exemption from state stamp duty
(D) Financial assistance for modern technology upgradation

70. Read the following statements regarding the Delhi-Mumbai Industrial Corridor (DMIC):
Statement I: The Delhi-Mumbai Industrial Corridor (DMIC) passes through Madhya Pradesh.
Statement II: The corridor aims to develop manufacturing cities alongside the alignment of the Western Dedicated Freight Corridor.
Which of the above statement(s) is/are correct?
(A) Both Statement I and II are true and II explains I
(B) Both Statement I and II are true but II does not explain I
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

71. Read the following statements concerning Special Economic Zones (SEZs) in Madhya Pradesh:
I. SEZ developers are granted exemption from electricity duty for a specified period.
II. SEZ units are considered foreign territory for the purpose of trade operations and duties.
III. Madhya Pradesh has zero functional IT SEZs.
IV. State government clearance is provided through a single window mechanism for SEZ units.
Which of the above statement(s) is/are correct?
(A) I, II and IV only
(B) II, III and IV only
(C) I, III and IV only
(D) I, II, III and IV

72. The traditional craft of Zari-Zardozi, an intricate art of embroidery, is closely associated with the cultural heritage of which city in Madhya Pradesh?
(A) Indore
(B) Bhopal
(C) Gwalior
(D) Ujjain

73. Which of the following best explains why the MSME sector is crucial for Madhya Pradesh?
(A) It requires the highest amount of foreign direct investment for operation
(B) It contributes marginally to employment but heavily to state space exploration
(C) It solely produces heavy machinery required by large public sector units
(D) It provides employment and wealth distribution at lower capital costs

74. Which of the following is a prominent defence equipment manufacturing facility established in the Malanpur industrial area through a joint venture?
(A) Hindustan Aeronautics Limited Aircraft Component Division
(B) BrahMos Aerospace Missile Manufacturing and Testing Node
(C) Punj Lloyd Small Arms Manufacturing Plant
(D) Bharat Dynamics Strategic Missile and Ammunition Plant

75. Which district in Madhya Pradesh is sometimes referred to as the 'Lucknow of Madhya Pradesh' due to its silk production?
(A) Mandla
(B) Chhindwara
(C) Balaghat
(D) Seoni

76. The forest-based plywood and timber processing industry in Madhya Pradesh is prominently clustered around which of the following railway junctions?
(A) Bina
(B) Katni
(C) Ujjain
(D) Itarsi

77. What is the primary function of the Inland Container Depot in Pithampur?
(A) To store agricultural grains for the state Public Distribution System
(B) To act as a testing facility for heavy military and defence vehicles
(C) To serve as a major terminal for domestic and international flights

NODIA

20. Read the following statements regarding the sugar industry in Madhya Pradesh:
I. The sugar industry is a weight-losing, agro-based industry.
II. Narsinghpur is one of the leading sugarcane producing districts.
III. All sugar mills in the state are completely owned by the central government.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) II and III only
(C) I and III only
(D) I, II and III

21. What is the main operational focus of the Vehicle Factory Jabalpur (VFJ)?
(A) Manufacturing high-end luxury passenger cars intended for global export
(B) Assembling specialized agricultural tractors for the state government
(C) Producing transport and logistics vehicles for the Indian Armed Forces
(D) Building high-speed diesel and electric locomotives for Indian Railways

22. Which city is popularly referred to as the Manchester of Madhya Pradesh due to its historical dominance in the cotton textile industry?
(A) Bhopal
(B) Indore
(C) Jabalpur
(D) Satna

23. The Chanderi saree industry has been granted a Geographical Indication (GI) tag. What does this signify?
(A) The sarees can only be sold within the specific geographical limits of Madhya Pradesh
(B) The weaving process has been completely automated by the state government agencies
(C) It is a generic term that any weaver in India is legally permitted to use for sarees
(D) The product possesses specific qualities attributable to its geographical origin

24. Bharat Heavy Electricals Limited (BHEL) Bhopal was established with the technical assistance of which country?
(A) Soviet Union
(B) United States of America
(C) Germany
(D) United Kingdom

25. Which of the following geological rock systems provides the primary raw material base for the cement industry in the Satna and Rewa regions?
(A) Gondwana system
(B) Vindhyan system
(C) Dharwar system
(D) Deccan Traps

26. Which of the following statements is correct regarding the textile industry in Madhya Pradesh?
(A) The textile industry is a recent development starting only after the year 2000
(B) The state remains completely devoid of powerloom sectors and modern weaving units
(C) The state imports all its raw cotton from neighbouring countries and global markets
(D) Indore and Ujjain are historical hubs for the cotton textile industry

27. Jabalpur is historically recognised as a hub for which of the following heavy industries?
(A) Ordnance and defence production
(B) Naval shipbuilding
(C) Commercial aircraft manufacturing
(D) Integrated iron and steel plants

28. Match List-I (Industrial Centre) with List-II (Associated District) and select the correct answer.
List-I: (Industrial Centre)
P. Chanderi
Q. Maheshwar
R. Nagda
S. Burhanpur
List-II: (Associated District)
1. Khargone
2. Ujjain
3. Ashoknagar
4. Burhanpur
(A) P-3, Q-1, R-2, S-4
(B) P-1, Q-3, R-4, S-2
(C) P-3, Q-2, R-1, S-4
(D) P-2, Q-1, R-3, S-4

Downloaded from www.pdf.tube

89. Based on the Government of India's revised MSME classification (applicable in MP), a micro enterprise is defined as a unit where:
(A) Investment under Rs 1 crore and turnover under Rs 5 crore
(B) Investment under Rs 10 crore and turnover under Rs 50 crore
(C) Investment under Rs 50 crore and turnover under Rs 250 crore
(D) Investment above Rs 50 crore but strictly under Rs 100 crore

90. Which of the following accurately describes the primary raw material base for the match-making industry located in Gwalior?
(A) Softwood timber from local forest tracts
(B) Imported synthetic polymers
(C) Agricultural stubble from wheat crops
(D) Limestone and bauxite waste

91. Which of the following is not considered a traditional cottage industry in Madhya Pradesh?
(A) Bidi rolling
(B) Petrochemical refining
(C) Terracotta pottery
(D) Handloom weaving

92. Which of the following is a negative impact of unplanned industrialization in major centres like Indore and Mandideep?
(A) Drastic and immediate reduction in total urban population counts
(B) Complete and total eradication of rural poverty in the state
(C) Over-saturation of water resources and increased pollution levels
(D) Spontaneous and rapid creation of dense forests in industrial zones

93. Find the odd one out regarding the locations of mega and regional food parks in Madhya Pradesh.
(A) Nimrani
(B) Jagakhedi
(C) Malanjkhand
(D) Babai

94. Read the following statements regarding provisions generally included in the MP MSME Development Policy:
I. Capital investment subsidy.
II. Subsidy on power tariff.
III. Quality certification assistance.
IV. Free land allocation without any lease rent permanently.
V. Reimbursement of patent registration costs.
Which of the above statement(s) is/are correct?
(A) I, II, III and V only
(B) II, III, IV and V only
(C) I, III, IV and V only
(D) I, II, III, IV and V

NODIA

95. What kind of linkage does the cement industry of Madhya Pradesh exhibit?
(A) Market-oriented linkage
(B) Raw material-oriented linkage
(C) Footloose industry linkage
(D) Port-oriented linkage

96. Which scheme was launched by the MP government to revive sick MSME industrial units?
(A) MP Heavy Industry Resurgence Plan
(B) MP MSME Revival and Rehabilitation Scheme
(C) MP Greenfield Development Project
(D) MP Foreign Direct Investment Scheme

97. The Borgaon industrial centre is situated in which of the following districts?
(A) Seoni
(B) Hoshangabad
(C) Betul
(D) Chhindwara

98. Which of the following districts is known for housing large tractor manufacturing facilities?
(A) Bhopal and Raisen (Mandideep)
(B) Rewa and Satna
(C) Shahdol and Umaria
(D) Panna and Chhatarpur

99. Given below are two statements, one labeled as Assertion (A) and the other as Reason (R).
Assertion (A): Pithampur hosts numerous ancillary units that produce auto components like gears, axles, and batteries.
Reason (R): Ancillary units depend on large original equipment manufacturers (OEMs) for their final market and benefit from physical proximity.
(A) Both A and R are true and R is the correct

explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

100. The industrial region of Pithampur includes several distinct zones. What is the primary focus of 'Sector 3' (also known as SEZ) in Pithampur?
(A) Solely agricultural farming
(B) Retail shopping malls
(C) Export-oriented manufacturing
(D) Residential housing for government employees

101. Which prominent pharmaceutical company has historically maintained significant manufacturing operations in Dewas?
(A) Ranbaxy (now Sun Pharma)
(B) Biocon Limited Integrated Biologicals
(C) Serum Institute of India Private Limited
(D) Bharat Biotech International Limited

102. What is the socio-economic dimension behind establishing industrial clusters like Maneri in Mandla district?
(A) To decentralise industrial growth and provide employment in tribal districts
(B) To strictly promote high-tech space and aeronautical research industries
(C) To relocate all IT and software companies away from the city of Indore
(D) To exploit and process maritime and marine resources within the region

103. The alkaloid factory, which processes opium, is situated in which district of Madhya Pradesh?
(A) Mandsaur
(B) Neemuch
(C) Ratlam
(D) Ujjain

104. Which sector constitutes the largest portion of MSME units registered in Madhya Pradesh?
(A) Advanced robotics
(B) Chemical fertilizers
(C) Aerospace engineering
(D) Agro and food processing

105. The city of Katni is colloquially known as the "City of Mud" or "Limestone City". Which major industry heavily dominates its economic landscape?
(A) Petrochemicals
(B) Cotton textiles
(C) Cement and marble cutting
(D) Information Technology

106. Which raw material is abundantly processed at the industrial units in Amlai (Shahdol district)?
(A) Bauxite for aluminium
(B) Bamboo and softwood for paper
(C) Limestone for cement
(D) Iron ore for steel

107. Which policy explicitly aims to make Madhya Pradesh a zero-waste state in agricultural production?
(A) MP Food Processing Policy
(B) State Mining Policy
(C) State Aviation Policy
(D) Defence Manufacturing Policy

108. "Vindhya Valley" is a prominent brand supported by the state government. What does it primarily market?
(A) Khadi, village products, and processed food items
(B) Heavy earth-moving and construction machinery
(C) Customized IT software and enterprise solutions
(D) Luxury automobiles and high-end transport vehicles

109. Match List-I (Industrial Institution/Corporation) with List-II (Headquarters/Location) and select the correct answer.
List-I: (Industrial Institution/Corporation)
P. MP Finance Corporation
Q. MP State Mining Corporation
R. MP Khadi and Village Industries Board
S. MP Textile Corporation
List-II: (Headquarters/Location)
1. Bhopal
2. Indore
3. Bhopal
4. Indore
(A) P-2, Q-1, R-3, S-4
(B) P-1, Q-2, R-4, S-3
(C) P-3, Q-4, R-1, S-2
(D) P-4, Q-3, R-2, S-1

Click Here to Buy book on Amazon

110. Consider the following major industrial areas in Madhya Pradesh:
1. Pithampur
2. Malanpur
3. Mandideep
4. Meghnagar

Which of the following represents the correct sequence of these areas from North to South based on their geographical location?
(A) 2, 3, 1, 4
(B) 2, 3, 4, 1
(C) 3, 2, 1, 4
(D) 1, 4, 3, 2

111. Identify the incorrect statement regarding the industrial corridors of Madhya Pradesh.
(A) They are designed to integrate with national freight corridors
(B) They aim to provide world-class infrastructure to manufacturing units
(C) They focus on creating smart industrial cities
(D) They are intentionally planned in environmentally fragile national parks

112. Read the following statements regarding the geography of Madhya Pradesh:
Statement I: Madhya Pradesh is a major producer of essential oils and oleoresins.
Statement II: The state has an abundance of medicinal and aromatic plants.
Which of the above statement(s) is/are correct?
(A) Both Statement I and II are correct, and II is the correct explanation of I
(B) Both Statement I and II are correct, but II is not the correct explanation of I
(C) Statement I is correct, but Statement II is incorrect
(D) Statement I is incorrect, but Statement II is correct

113. Which institution was established specifically to develop industrial infrastructure, such as industrial areas and sheds, across Madhya Pradesh?
(A) MP Tourism Board
(B) MP State Election Commission
(C) MP Audyogik Kendra Vikas Nigam (AKVN)
(D) MP Board of Secondary Education

114. Find the odd one out among the listed agro-based industries.
(A) Sugar production
(B) Cement manufacturing
(C) Soya oil extraction
(D) Cotton textiles

115. Which of the following correctly describes the "Cluster Development Approach" adopted by Madhya Pradesh for MSMEs?
(A) Isolating each industry in a different district to avoid market competition
(B) Forcing all small businesses to merge into one single large state corporation
(C) Exporting all raw materials instead of processing them within local clusters
(D) Grouping related enterprises to build shared infrastructure and supply chains

116. The Babai industrial estate, notable for agro-processing and related industries, is located in the district of:
(A) Raisen
(B) Sehore
(C) Harda
(D) Narmadapuram

117. Which of the following is the correct definition of a "Footloose Industry", of which electronics in Indore is often cited as an example?
(A) An industry strictly tied to a specific local raw material source
(B) An industry using extremely heavy and difficult to move materials
(C) An industry relying entirely on river-based transport networks
(D) An industry that can be located at any site regardless of factors

NODIA

118. Given below are two statements, one labeled as Assertion (A) and the other as Reason (R).
Assertion (A): The Mandideep industrial area experienced rapid growth in the late 20th century.
Reason (R): Its close proximity to Bhopal provided essential infrastructure, administrative support, and connectivity.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.

ANSWERS

1. (A) I only
Nagda, located in Ujjain district, is a significant industrial town hosting Grasim Industries, which is a global leader in viscose staple fiber production. This industry utilizes wood pulp to create man-made fibers, reducing the dependence on natural cotton and silk. The state possesses internal capacity for such production, contradicting claims of total reliance on finished yarn imports for synthetic textiles.

2. (C) Diamond Cement - Indore
The cement industry in Madhya Pradesh is strategically located near limestone deposits. While Kymore hosts ACC, Satna is home to Prism, and Maihar features Birla Jute Cement, the Diamond Cement plant is specifically situated in Narsingarh, within the Damoh district. It is not located in Indore, which serves primarily as a commercial and textile hub rather than mineral-based manufacturing.

3. (C) Nationalising all private manufacturing units within the state
The Madhya Pradesh Industrial Promotion Policy focuses on creating a competitive environment for private and public enterprises. Key objectives include enhancing the ease of doing business, generating large-scale employment, and ensuring balanced regional development. Nationalizing private units is not an objective, as the policy encourages private investment and global partnerships to drive economic growth and industrial modernization throughout the state.

4. (A) Both A and R are true and R is the correct explanation of A.
The establishment of Bharat Heavy Electricals Limited in Bhopal acted as a catalyst for industrialization in the region. Large mother plants create a demand for components and services, leading to the growth of ancillary units in nearby areas like Govindpura. This symbiotic relationship ensures that heavy industries have a reliable local supply chain while fostering the growth of diverse small-scale enterprises.

5. (B) Rani Ahilyabai Holkar
Maheshwari sarees gained historical prominence and royal patronage under the rule of Rani Ahilyabai Holkar of the Holkar dynasty in the eighteenth century. She invited skilled weavers from across India to Maheshwar to create unique designs for the royal family and guests. This initiative transformed the town into a renowned center for high-quality handloom weaving, blending traditional styles with elegant patterns.

6. (B) Security Paper Mill
Jabalpur is a major hub for defense production, housing facilities such as Ordnance Factory Khamaria, the Vehicle Factory, and the Grey Iron Foundry. These units manufacture ammunition, military vehicles, and heavy castings. Conversely, the Security Paper Mill is located in Narmadapuram, formerly known as Hoshangabad. This mill produces high-quality paper used specifically for printing Indian currency notes and non-judicial stamps.

7. (B) Based primarily on agro-based, forest-based, and mineral-based units
Before the economic reforms of nineteen ninety-one, the industrial landscape of Madhya Pradesh was characterized by its reliance on natural resources. The economy was dominated by units processing agricultural crops, forest produce like timber and tendu leaves, and minerals like limestone and coal. Modern high-tech electronics and software hubs only began to emerge more prominently in the post-liberalization and digital era.

8. (B) Limestone
The distribution of cement manufacturing units is highly dependent on the availability of bulky and weight-losing raw materials. Limestone is the primary ingredient required for cement production, and its abundance in the Vindhyan rock formations makes regions like Satna, Rewa, and Damoh ideal locations. Proximity to these mines reduces transportation costs, ensuring the economic viability of large-scale cement plants.

Downloaded from www.pdf.tube

explains I
(B) Both Statement I and II are true but II does not explain I
(C) Statement I is true but Statement II is false
(D) Statement I is false but Statement II is true

129. What is the impact of Invest MP summits on the industrial climate?
(A) It decreases the state GDP by stalling industrial production units
(B) Catalyst for policy reforms, global branding, and FDI inflow
(C) It forces local and small industries to shut down permanently
(D) It limits capital investments strictly to the agricultural sector

130. What constitutes the defining feature of the "Readymade Garment Complex" situated in Indore?
(A) Cluster providing design, stitching, and export facilities for apparel
(B) Unit that exclusively processes high-grade raw silk exported from China
(C) Plant manufacturing heavy industrial safety gear made of mineral asbestos
(D) State heritage museum with no active commercial manufacturing activities

www.nodia.in

NODIA

This facility made the country more self-reliant in paper production and utilized local raw materials such as bamboo and hardwood from the surrounding forests.

36. (A) Plastic Park - Tamot
The state government has developed specialized industrial parks to promote specific sectors. The Plastic Park is located at Tamot in the Raisen district, providing dedicated infrastructure for plastic-related manufacturing. Other parks are situated elsewhere; for instance, the first spice park was established in Chhindwara, and IT parks are primarily located in major cities like Indore, Bhopal, and Jabalpur.

37. (A) Dhar
Pithampur is a major industrial township located within the administrative jurisdiction of the Dhar district. Although it is very close to the commercial city of Indore and benefits from its proximity, it officially belongs to Dhar. The area is globally recognized as an automobile hub, hosting numerous multinational companies and serving as a critical engine of economic growth for the region.

38. (D) Shahdol
The Orient Paper Mill is a large-scale private sector paper manufacturing unit located at Amlai. Geographically, Amlai is situated in the Shahdol district. This mill utilizes the abundant forest resources of the region, including bamboo and eucalyptus, to produce various grades of paper. It is one of the oldest and most significant forest-based industrial units in eastern Madhya Pradesh.

39. (D) Soybean
Madhya Pradesh is often called the Soy State because it is the leading producer and processor of soybean in India. The state has an extensive network of solvent extraction plants and refineries, particularly in the Malwa region. This crop is a major contributor to the state's agricultural GDP and supports a large agro-processing industry that produces edible oil and soy meal.

40. (D) Oman
The Bina Refinery, located in the Sagar district, was established as a joint venture between Bharat Petroleum Corporation Limited and the Oman Oil Company. This significant petrochemical project processes crude oil to produce fuels and various by-products. The partnership with Oman ensured technical expertise and investment, making it a vital infrastructure asset for the energy security and industrial growth of the state.

41. (A) P-2, Q-4, R-1, S-3
Mineral-based industries are distributed according to the availability of specific resources. The slate pencil industry is centered in Mandsaur, while diamond polishing is naturally associated with Panna. Malanjkhand in Balaghat is the hub for copper mining and smelting. Coal bed methane extraction is a modern energy project located in the Shahdol district, highlighting the diverse mineral wealth of Madhya Pradesh.

42. (A) P-4, Q-1, R-3, S-2
Madhya Pradesh has established specialized industrial complexes to foster targeted growth. The Electronic Complex is located in Indore, while the Leather Complex is in Dewas. Sagar is home to the Stainless Steel Complex, and the Agro Complex is situated in Chhindwara. These clusters provide shared infrastructure and specialized services, helping businesses in these sectors to operate more efficiently and competitively.

43. (B) Gwalior and Morena
Glass manufacturing units in Madhya Pradesh are primarily concentrated in the Gwalior and Morena districts. This location is advantageous due to the proximity to high-quality silica sand deposits and the influence of the historic glass-producing centers in neighboring Uttar Pradesh. These units produce various items, including glass containers and architectural glass, contributing to the industrial diversity of the northern region.

44. (D) Burhanpur
Nepanagar, famous for its newsprint paper mill, is located in the Burhanpur district of Madhya Pradesh. The town developed significantly around the National Newsprint and Paper Mills, which was commissioned in the nineteen fifties. Its location in Burhanpur provides access to the necessary forest resources and water supply required for large-scale paper production, making it a key industrial site in the state.

Click Here to Buy book on Amazon

9. (B) Bhopal lacks any significant heavy engineering units
Bhopal is actually a vital center for heavy engineering, primarily due to the presence of Bharat Heavy Electricals Limited, one of India's largest power equipment manufacturers. Additionally, Indore and Pithampur are major hubs for pumps, motors, and automobile engineering. The Malwa region is also known for widespread manufacturing of agricultural implements, supporting the state's robust farming sector through localized production.

10. (C) Mandideep
Chanderi, Maheshwar, and Bagh are historically famous for their traditional handicrafts and textiles, including the globally recognized Chanderi and Maheshwari sarees and Bagh prints. In contrast, Mandideep is a modern industrial area located in the Raisen district. It focuses on heavy industries, electronics, and chemicals rather than traditional textile arts, making it distinct from the other heritage-based weaving and printing centers.

11. (D) Pithampur
Pithampur, located in the Dhar district near Indore, has earned the nickname of being the regional Detroit due to its heavy concentration of automobile manufacturing units. It houses several major national and international vehicle manufacturers along with a vast network of ancillary units. This industrial cluster is central to the state's manufacturing sector, contributing significantly to vehicle production, exports, and technical employment.

12. (C) Burhanpur
The foundation of the modern textile industry in the state was laid in nineteen hundred and six with the establishment of the Burhanpur Tapti Mill. Burhanpur was chosen due to its historical connection to cotton trade and proximity to cotton-growing regions. Although Indore later emerged as a much larger hub for textile manufacturing, the first organized cotton mill began in Burhanpur.

13. (A) Morena
The first cement plant in the state was established in nineteen twenty-two at Banmore, which is located in the Morena district. This early industrial development took advantage of local limestone availability and rail connectivity. While Satna and Katni later became more dominant centers for cement production, Banmore remains historically significant for initiating the large-scale mineral processing industry in Madhya Pradesh.

14. (C) Pure cotton base with reversible borders known as bugdi
Traditional Maheshwari sarees are distinguished by their lightweight texture and the use of fine cotton or silk blends. A unique characteristic is the reversible border, locally called bugdi, which allows the saree to be worn on either side. These sarees often feature geometric patterns and stripes, reflecting the architectural motifs found in the forts and temples of the Maheshwar region.

15. (D) Jabalpur
The Gun Carriage Factory was established in nineteen hundred and four in Jabalpur, making it one of the oldest and most important defense production units in India. It specializes in the manufacturing of heavy artillery, mountain guns, and various sophisticated weapon systems for the Indian Armed Forces. Its location in Jabalpur leveraged the city's strategic central position and available technical workforce.

16. (A) It absorbs surplus agricultural labour through heavy industries and MSMEs
The industrial sector plays a critical role in diversifying the state's economy by providing alternative employment opportunities. By establishing heavy industries and fostering a vibrant MSME ecosystem, the sector absorbs surplus labor from the agricultural fields. This transition helps in reducing rural underemployment and increases the overall productivity of the workforce, contributing to balanced economic growth and structural transformation.

17. (A) Heavy electrical equipment like switchgears, transformers, and motors
The Bharat Heavy Electricals Limited plant in Bhopal is a premier manufacturing unit focused on the power and transportation sectors. Its product portfolio includes heavy electrical machinery such as high-capacity transformers, switchgears, control panels, and traction

Downloaded from www.pdf.tube

motors for railways. This facility is a vital part of India's self-reliance in power generation and transmission equipment, supporting energy infrastructure across the country.

18. (A) It provides rural employment while preserving traditional weaving heritage
The handloom industry is a vital decentralized sector that provides sustainable livelihoods to thousands of rural artisans. It allows for the preservation of ancient weaving techniques and cultural heritage while requiring relatively low capital investment. By promoting traditional crafts like Chanderi and Maheshwari, the industry supports inclusive growth and keeps alive the unique artistic identity of the various regional communities.

19. (A) Satna, Damoh, Katni, Morena
Satna is the leading district for cement production in Madhya Pradesh, hosting multiple large-scale plants due to vast limestone reserves. Damoh follows with significant manufacturing capacity, followed by Katni, which is also famous for its mineral processing units. Morena, while being home to the state's first cement plant, currently has a lower concentration of units compared to the Satna-Rewa belt.

20. (A) I and II only
Sugar production is an agro-based industry that uses sugarcane, a weight-losing raw material, requiring mills to be located near the fields. Narsinghpur is a top producer of sugarcane in the state, supporting several mills. While some units are in the cooperative sector, the industry is not entirely government-owned, as private players also operate significant sugar manufacturing facilities across the state.

21. (C) Producing transport and logistics vehicles for the Indian Armed Forces
The Vehicle Factory Jabalpur is a dedicated defense manufacturing unit under the Ministry of Defence. Its primary focus is the assembly and production of specialized high-mobility transport and logistics vehicles, such as the Stallion and Shaktiman trucks, for the Indian Armed Forces. These vehicles are designed to operate in rugged terrains, ensuring reliable logistics support for military operations across the nation.

22. (B) Indore
Indore is traditionally known as the Manchester of Madhya Pradesh because of its historical prominence as a major cotton textile hub. During the twentieth century, the city hosted numerous large-scale textile mills that drove its economic growth. While many old mills have closed, Indore remains a center for garment manufacturing and trade, continuing its long-standing legacy in the textile industry.

23. (D) The product possesses specific qualities attributable to its geographical origin
A Geographical Indication tag is a legal protection granted to products that originate from a specific location and possess qualities essentially tied to that place. For Chanderi sarees, this ensures that only authentic weavers from the Chanderi region can use the name, protecting the traditional craft from imitation. This tag helps in maintaining quality standards and promoting the local heritage globally.

24. (D) United Kingdom
Bharat Heavy Electricals Limited in Bhopal was established in the late nineteen fifties to manufacture heavy electrical equipment. This major public sector undertaking was developed with technical collaboration from the United Kingdom. It remains a cornerstone of the heavy engineering industry in the state, producing transformers, switchgears, and traction motors for railways and various power projects across the nation and for export.

25. (B) Vindhyan system
The cement industry in the Satna and Rewa regions relies heavily on the Vindhyan rock system. This geological formation is rich in high-grade limestone, which is the primary raw material for cement manufacturing. The extensive outcrops of these rocks provide an abundant and accessible supply of minerals, leading to the concentration of several large-scale cement plants in this specific geographical belt.

26. (D) Indore and Ujjain are historical hubs for the cotton textile industry
The cotton textile industry has a long history in the state, particularly in the Malwa region. Indore and Ujjain emerged as major centers during the early twentieth century due to the

NODIA

local availability of cotton and favorable climatic conditions. While modern technology and powerlooms have updated the sector, these cities continue to be recognized for their enduring contribution to textile manufacturing.

27. (A) Ordnance and defence production
Jabalpur is historically recognized as a major hub for ordnance and defense production in India. It hosts several critical facilities, including the Gun Carriage Factory, Ordnance Factory Khamaria, and the Vehicle Factory. These units produce a wide range of military equipment, including artillery, ammunition, and specialized army vehicles, playing a vital role in national security and the regional industrial economy.

28. (A) P-3, Q-1, R-2, S-4
Traditional industrial centers are located across various districts in the state. Chanderi weaving is based in Ashoknagar, while Maheshwar is situated in Khargone. Nagda, famous for man-made fibers, is in Ujjain district, and Burhanpur is home to the city and district of the same name. This distribution highlights the diverse regional specialties in textile and fiber production throughout Madhya Pradesh.

29. (C) Raisen
Mandideep is a prominent industrial township located in the Raisen district, situated very close to the capital city, Bhopal. It was developed to decentralize industry and currently hosts a diverse range of units, including heavy engineering, chemicals, and electronics. The proximity to Bhopal provides excellent administrative support and infrastructure, making it one of the most successful industrial areas in the state.

30. (D) Ratlam
The first sugar mill in Madhya Pradesh was established in nineteen thirty-four in Jaora, located in the Ratlam district. This marked the beginning of organized agro-based industrialization in the sugar sector. Ratlam and surrounding districts have since remained important for sugarcane cultivation and processing, contributing to the state's sugar production and providing employment to the local rural and urban population.

31. (C) IT parks support software development, BPOs, and startup incubation
The Information Technology industry in Bhopal has grown significantly through the establishment of dedicated IT parks. These facilities provide the necessary infrastructure for software development, Business Process Outsourcing services, and the incubation of new startups. The state government encourages this sector to diversify the economy, leveraging the city's educational institutions and technical workforce to attract investment in digital services.

32. (B) Tendu leaves
The bidi industry is a major forest-based cottage industry in Madhya Pradesh, relying on tendu leaves as the primary wrapping material. Tendu trees are found in abundance across the state's forest tracts. The collection of these leaves provides essential seasonal employment and income to millions of tribal and rural people, making it a socio-economically significant activity for the state.

33. (B) Pithampur
The National Automotive Test Tracks is a world-class automotive testing facility located in Pithampur. It features one of the longest high-speed tracks in Asia, used for testing various vehicle parameters. This facility enhances the state's reputation as an automobile hub, attracting global manufacturers to utilize the tracks for research, development, and quality certification of their latest vehicle models.

34. (A) I, II, III and IV only
Madhya Pradesh has established several mega food parks, such as Indus in Khargone and Avantika in Dewas, to process agricultural surplus. Ratlam is also a major center for snacks like namkeen. While the state excels in agro-processing, it is landlocked and does not rely on maritime fish resources. The food processing sector is primarily focused on grains, pulses, and horticulture produce.

35. (A) Newsprint paper
Nepanagar is historically significant as the location of the National Newsprint and Paper Mills, established in the nineteen fifties. It was the first mill in India to produce newsprint paper, which is used for printing newspapers.

Click Here to Buy book on Amazon

(C) A is true but R is false.
(D) A is false but R is true.

119. What constitutes the most appropriate reason for the concentration of the bidi industry in the Sagar and Jabalpur divisions?
(A) Availability of tendu leaves and affordable local labour
(B) High density of specialized heavy engineering colleges
(C) Presence of massive high-grade iron ore mineral deposits
(D) Strong network of active international cargo airports

120. Identify the correct statement about the Invest MP summits.
(A) Showcase sector opportunities and sign MoUs for state investment
(B) Held exclusively for foreign diplomats without private corporate participation
(C) Focus only on the agricultural policies of the central government bodies
(D) Restrict participation of local MSMEs and small-scale business owners

121. The establishment of food processing parks requires robust cold chain infrastructure. Which agricultural product of Madhya Pradesh heavily relies on this for export?
(A) Horticulture produce
(B) Commercial wheat crops
(C) Refined soybean oils
(D) Processed raw cotton

122. The industrial area of Baidhan is known as the energy capital of Madhya Pradesh due to its heavy clustering of power plants. In which district is it located?
(A) Rewa
(B) Sidhi
(C) Shahdol
(D) Singrauli

123. What is the main reason the handloom weavers of Chanderi and Maheshwar face economic challenges despite the GI tag?
(A) Total ban on all handloom products by the central government agencies
(B) Depletion of limestone reserves used for manufacturing in the state
(C) Competition from powerloom imitations and synthetic fabrics
(D) Lack of electricity supply for their manual and traditional looms

124. The industrial growth of Madhya Pradesh is supported by robust power availability. Which entity is primarily responsible for generating state-owned thermal and hydel power for industries?
(A) MP Industrial Development Corporation (MPIDC)
(B) MP Power Generating Company Limited (MPPGCL)
(C) MP Financial Corporation (MPFC)
(D) MP Road Development Corporation (MPRDC)

125. Which town in Madhya Pradesh is famously associated with the brass and bell metal craft locally known as Dhokra art?
(A) Mandu
(B) Pithampur
(C) Tikamgarh
(D) Khajuraho

NODIA

126. Which of the following is a non-traditional, emerging industry in Madhya Pradesh supported by recent IT policies?
(A) Data centres and electronic system design
(B) Jute milling and fiber production units
(C) Open-cast and underground coal mining
(D) Smelting and processing of copper ores

127. Identify the correct pair regarding the raw material and its associated industry in Madhya Pradesh.
(A) Bauxite - Cement Industry
(B) Silica sand - Glass Industry
(C) Limestone - Aluminium Industry
(D) Tendu leaves - Textile Industry

128. Read the following statements regarding the geography of Madhya Pradesh:
Statement I: Madhya Pradesh is a landlocked state.
Statement II: The state compensates for the lack of seaports by developing robust Inland Container Depots (ICDs) and dry ports.
Which of the above statement(s) is/are correct?
(A) Both Statement I and II are true and II

45. (C) Dewas
The Leather Complex in Madhya Pradesh is established in Dewas to promote the tanning and footwear industries. This cluster provides specialized infrastructure and environmental management facilities for leather processing units. Dewas has a long-standing history in leather manufacturing, and the complex supports both domestic production and the export of high-quality leather goods and accessories to global markets.

46. (B) OEM growth creates a robust ecosystem of auto-ancillary manufacturing
The presence of large original equipment manufacturers in Pithampur has a significant multiplier effect on the local economy. These major plants create a constant demand for thousands of components, leading to the establishment of numerous ancillary units. This ecosystem fosters technical innovation, generates local employment, and ensures a reliable supply chain, making the entire industrial cluster more resilient and competitive.

47. (B) Due to the presence of black cotton soil which is highly suitable for soybean cultivation
The Malwa plateau is the central hub for soybean processing because its fertile black cotton soil is perfectly suited for growing the crop. The region's climate and soil properties allow for high yields, providing a steady supply of raw material for extraction units. This proximity to the source of production minimizes transportation costs and ensures the profitability of the soybean industry.

48. (B) The state is devoid of any petrochemical processing units
Madhya Pradesh has a significant presence in the chemical and fertilizer sector. National Fertilizers Limited operates a major plant at Vijaipur, which uses natural gas from the HVJ pipeline. Contrary to the claim that the state lacks petrochemical units, the Bina Refinery in Sagar district is a major facility that processes petroleum and produces various essential petrochemical products and fuels.

49. (A) It provides supplementary income and employment for rural populations
The bidi industry is a vital cottage industry that provides essential supplementary income to millions of rural and tribal households. It is a labor-intensive activity that requires manual dexterity rather than high-tech automation. By utilizing locally available tendu leaves and tobacco, the industry offers seasonal work, helping to alleviate rural poverty and providing a livelihood for many marginalized communities across the state.

50. (A) 4, 1, 2, 3
Geographically, the Orient Paper Mill in Amlai is the northernmost of these units. Moving south, the Bank Note Press is located in Dewas. Further south is the Security Paper Mill in Narmadapuram, and the National Newsprint and Paper Mills in Nepanagar is the southernmost. This sequence reflects the distribution of paper and currency-related industrial facilities across the state's latitudinal span.

51. (D) Bhedaghat in Jabalpur
Bhedaghat, located near Jabalpur, is world-famous for its stunning marble rocks along the Narmada River. This geological abundance has led to the development of a significant local industry focused on marble quarrying, cutting, and artistic carving. Artisans in the region create intricate sculptures and decorative items, making it a prominent center for stone-based handicrafts and industrial marble processing in the state.

52. (D) Indore
Indore has emerged as the primary pharmaceutical hub of Madhya Pradesh, hosting numerous national and multinational drug manufacturing companies. The city's well-developed infrastructure, presence of special economic zones, and excellent connectivity make it an ideal location for the pharma sector. These units produce a wide range of formulations and active pharmaceutical ingredients, contributing significantly to both domestic supply and international exports.

53. (C) Sehore
The Indian Farmers Fertiliser Cooperative has established a significant presence in the Sehore district to support the regional agricultural sector. By providing essential fertilizers and technical guidance to farmers, these operations help in improving crop yields and soil health. The strategic location in Sehore allows for efficient

Downloaded from www.pdf.tube

rich region. By offering plots and facilities to local businesses, the estate helps in diversifying the regional economy beyond mining and agriculture, creating local employment and fostering a culture of industrial development in eastern Madhya Pradesh.

88. (A) I and II only
Under the Delhi-Mumbai Industrial Corridor project, several investment nodes have been identified in Madhya Pradesh, including the Pithampur-Dhar-Mhow region. Other areas like Neemuch-Nayagaon are also proposed for industrial development. However, the central administrative headquarters for the national DMIC project is located in Delhi, not Bhopal. The project aims to modernize infrastructure and create smart industrial cities along the alignment of the dedicated freight corridor.

89. (A) Investment under Rs 1 crore and turnover under Rs 5 crore
According to the revised MSME classification implemented across India, a micro enterprise is defined by two specific financial criteria. The investment in plant and machinery or equipment must not exceed one crore rupees, and the annual turnover must not exceed five crore rupees. This classification helps the state government in targeting incentives and support specifically toward the smallest units, which are vital for rural and local entrepreneurship.

90. (A) Softwood timber from local forest tracts
The match-making industry in Gwalior is fundamentally dependent on the availability of softwood timber. This raw material is sourced from local forest tracts and used to manufacture matchsticks. The proximity to these forests ensures a steady and affordable supply of wood, which is essential for the economic viability of the industry. This agro-forest-based manufacturing provides significant employment in the northern region of the state.

91. (B) Petrochemical refining
Traditional cottage industries are typically characterized by manual labor, low capital investment, and the use of local resources, such as bidi rolling, pottery, and handloom weaving. Petrochemical refining, however, is a modern, high-capital, and technology-intensive industry. It requires massive infrastructure and complex processing, making it a large-scale heavy industry rather than a traditional cottage activity performed in households or small village units.

92. (C) Over-saturation of water resources and increased pollution levels
Unplanned industrialization in major centers can lead to significant environmental challenges. Rapid growth in areas like Indore and Mandideep often causes the over-exploitation of local water resources and increased levels of air and water pollution. This environmental degradation can affect the health of residents and the sustainability of the industries themselves, highlighting the need for balanced development and strict environmental regulations in industrial zones.

93. (C) Malanjkhand
Nimrani, Jagakhedi, and Babai are locations associated with the development of mega or regional food parks intended to process agricultural surplus. Malanjkhand, however, is famous for its massive open-cast copper mine and related mineral processing activities. It is not associated with the food processing sector. This distinction highlights the difference between agro-based industrial initiatives and the state's traditional mineral-based mining operations.

94. (A) I, II, III and V only
The MSME Development Policy offers various incentives like capital subsidies, power tariff reductions, and assistance for quality certification and patent costs. While the government provides land on long-term leases at subsidized rates, it does not typically offer free land without any lease rent permanently. The policy focuses on reducing initial setup costs and improving the technological standards of small-scale enterprises to make them more competitive.

95. (B) Raw material-oriented linkage
The cement industry is a classic example of a raw material-oriented industry. Since limestone, the primary ingredient, is heavy and loses weight during processing, it is most economical to locate plants near the mines. Madhya Pradesh's cement industry exhibits this linkage clearly, with units concentrated in limestone-rich areas like Satna and Rewa to minimize the high cost of transporting bulky raw materials.

NODIA

support for the growth of smaller units, which are crucial for employment generation and rural industrialization. The department formulates specific policies, provides financial assistance, and facilitates cluster development to enhance the competitiveness and sustainability of the MSME sector.

63. (A) Heavy shipbuilding
Malanpur is a major industrial area in the Bhind district, known for diverse units including defense hardware, automobile components, and food processing. Since Madhya Pradesh is a landlocked state with no access to the sea, heavy shipbuilding is not an industry found in this region. The area instead focuses on manufacturing sectors that utilize road and rail transport for distributing their finished products.

64. (A) P-3, Q-4, R-2, S-1
Various manufacturing centers in the state specialize in specific products. Mhow is known for umbrella production, while clocks and watches are manufactured in Betul. Guna is a center for the bicycle industry, and Gwalior hosts significant biscuit manufacturing units. This regional specialization reflects the diverse industrial base of Madhya Pradesh, where different towns have developed expertise in specific consumer goods over time.

65. (A) Malanpur
Malanpur, located in the Bhind district near Gwalior, was developed to serve as an industrial counter-magnet to reduce urban congestion in major cities. It has successfully attracted numerous multinational corporations and large national companies across sectors like defense, food processing, and consumer goods. The area provides robust infrastructure and connectivity, making it a key destination for large-scale industrial investment in northern Madhya Pradesh.

66. (A) The state relies solely on coastal shipping routes for its industrial corridors
As a landlocked state, Madhya Pradesh cannot rely on coastal shipping for its industrial corridors. Instead, it focuses on developing strong road and rail-based corridors that integrate with national freight routes. Major planned corridors include the Bhopal-Bina and Indore-Pithampur regions, which aim to provide world-class infrastructure and logistics support to manufacturing units, facilitating the efficient movement of goods across the country.

67. (C) Datia and Chhatarpur
The districts of Datia and Chhatarpur are notable for their granite cutting and polishing units. These areas are rich in high-quality granite and other decorative stones due to their unique geological formations. The local industry processes these stones for use in construction and monuments, providing employment and adding value to the state's mineral resources. This sector contributes significantly to the regional economy in northern Madhya Pradesh.

68. (B) MP Trade and Investment Facilitation Corporation (TRIFAC)
The Madhya Pradesh Trade and Investment Facilitation Corporation serves as the single-window nodal agency for promoting investment in the state. It provides a comprehensive platform for investors to obtain clearances and information, simplifying the process of setting up new businesses. TRIFAC acts as a bridge between the government and the private sector, ensuring that industrial projects receive the necessary support and facilitation.

69. (A) Exemption from all central direct taxes permanently
The MSME Development Policy of Madhya Pradesh includes various incentives such as interest subsidies, exemptions from state stamp duty, and financial assistance for technology upgradation. However, the state government cannot grant permanent exemptions from central direct taxes, as these are under the jurisdiction of the national government. The policy focuses on reducing state-level costs and providing infrastructure support to foster the growth of small-scale enterprises.

70. (B) Both Statement I and II are true but II does not explain I
The Delhi-Mumbai Industrial Corridor is a major national project that indeed passes through Madhya Pradesh, identifying several investment nodes. The corridor is designed to leverage the Western Dedicated Freight Corridor to foster manufacturing. While both facts are

Click Here to Buy book on Amazon

immense opportunities for value addition. These units process grains, oilseeds, and fruits, providing employment and increasing the shelf life of farm produce. This sector is vital for rural industrialization and connecting the state's farmers to wider domestic and global markets.

105. (C) Cement and marble cutting
Katni is renowned for its vast deposits of limestone and marble, which have led to its popular name as the Limestone City. The local economy is heavily dominated by large-scale cement manufacturing and numerous units dedicated to marble cutting and polishing. These industries leverage the rich mineral resources of the region, making Katni a critical node for construction materials and mineral-based exports in Madhya Pradesh.

106. (B) Bamboo and softwood for paper
The industrial units in Amlai, particularly the Orient Paper Mill, primarily process bamboo and softwood. These raw materials are abundant in the forests of the Shahdol region. The mill utilizes these resources to produce various types of paper, making it a significant forest-based industrial hub. This activity supports the local economy by providing direct employment and sustaining the supply chain for forest produce collection.

107. (A) MP Food Processing Policy
The Madhya Pradesh Food Processing Policy aims to maximize value addition and minimize agricultural wastage, working toward a zero-waste goal. By encouraging the establishment of processing units near farms, the policy ensures that surplus produce is converted into finished products rather than perishing. This approach increases farmers' income and creates a sustainable agro-industrial ecosystem that utilizes every part of the agricultural output.

108. (A) Khadi, village products, and processed food items
Vindhya Valley is a prominent brand supported by the Madhya Pradesh Khadi and Village Industries Board. It is used to market a wide range of products including honey, spices, oils, and other village-made items. By providing a common brand name and marketing support, the state helps small rural producers and self-help groups reach a wider consumer base, promoting traditional rural entrepreneurship and sustainable livelihoods.

109. (A) P-2, Q-1, R-3, S-4
Madhya Pradesh Finance Corporation is headquartered in Indore to facilitate industrial credit, while the State Mining Corporation is located in Bhopal for administrative oversight. The Khadi and Village Industries Board also operates from the capital, whereas the Textile Corporation was traditionally based in Indore, reflecting the city's historical dominance as the primary center for the regional cotton textile industry and trade.

110. (B) 2, 3, 4, 1
Malanpur is situated in the northern Bhind district near Gwalior. Moving southwards, Mandideep is located in the Raisen district near Bhopal. Further west and slightly south is Meghnagar in the Jhabua district, followed by Pithampur in the Dhar district. This geographical distribution reflects the state's strategic planning of industrial growth across its varied northern and central regions to ensure balanced regional development.

111. (D) They are intentionally planned in environmentally fragile national parks
Industrial corridors in Madhya Pradesh are designed to integrate with national freight networks and provide world-class infrastructure to manufacturing hubs. They aim to create smart industrial cities and foster economic growth. Contrary to being planned in fragile national parks, these corridors are strategically located along major transport routes to minimize environmental impact while maximizing logistics efficiency and accessibility for various manufacturing sectors.

112. (A) Both Statement I and II are correct, and II is the correct explanation of I
Madhya Pradesh is a major producer of essential oils and oleoresins because of its vast forest and agricultural wealth. The state has an abundance of diverse medicinal and aromatic plants that provide the raw materials for these products. This natural resource base has led to the growth of specialized extraction units, making the state a significant player in the national fragrance and pharmaceutical sectors.

NODIA

79. (B) Timber, Tendu leaves, Bamboo, Sal seeds
Timber remains the most significant forest product in terms of industrial volume and revenue for Madhya Pradesh. It is followed by tendu leaves, which support the massive bidi industry. Bamboo is another major produce used in paper and handicraft sectors, while sal seeds are collected for oil extraction. This sequence reflects the relative economic importance of these various forest resources to the state's treasury and industrial base.

80. (D) Japan
The optical fibre factory in Mandideep was established with technical collaboration from Japan, specifically involving companies like Fujikura. This facility produces high-quality optical fibers used in telecommunications and high-speed internet infrastructure. The partnership with Japanese firms brought advanced technology and manufacturing standards to the state, making Madhya Pradesh a significant player in the high-tech telecommunications equipment manufacturing sector within India and for international markets.

81. (C) Meghnagar
Meghnagar is a prominent industrial cluster located in the Jhabua district, known for its large tribal workforce. The area is rich in rock phosphate deposits, which form the base for several local chemical and fertilizer industries. The state government has developed Meghnagar to provide employment in this tribal belt and to utilize the regional mineral wealth effectively, making it a key industrial center in western Madhya Pradesh.

82. (A) Papier-mâché art - Burhanpur
Papier-mâché art is traditionally associated with cities like Ujjain and Gwalior rather than Burhanpur. Other pairs are correct: Bagh Prints are a specialty of Dhar, and bell metal art is prominent in Tikamgarh and Datia. Burhanpur is instead famous for its historical textile industry. This distinction highlights the unique geographical distribution of various traditional handicrafts and cultural arts across different regions of Madhya Pradesh.

83. (D) Indore and the local airport
The Super Corridor is a major infrastructure project in Indore designed to attract IT companies and corporate headquarters. It connects the main city of Indore to the Devi Ahilya Bai Holkar International Airport. This zone features modern amenities, including IT parks, sports complexes, and residential areas. Its strategic location and world-class connectivity make it a prime destination for high-tech investments and urban development in the state.

84. (C) Inland Container Depot (ICD)
The dry port in Pithampur is technically referred to as an Inland Container Depot. Since Madhya Pradesh is landlocked, this facility acts as a terminal for sea cargo, providing customs clearance, warehousing, and logistics services. It enables local manufacturers to handle international trade directly from the state, significantly reducing the time and cost involved in transporting goods to and from distant coastal seports for export.

NODIA

85. (C) Indore
The Global Investors Summit, often branded as Magnificent MP, is typically hosted in Indore. The city's status as the commercial capital of the state and its excellent infrastructure make it the ideal venue for this high-profile event. The summit serves as a platform for the state government to showcase investment opportunities, sign agreements with corporate leaders, and highlight the business-friendly policies of Madhya Pradesh.

86. (B) Mrignayani
Mrignayani is the official brand name for the chain of emporiums run by the Madhya Pradesh Government. These outlets market a wide variety of authentic handicrafts and handlooms produced by regional artisans. By providing a platform for products like Chanderi sarees, Maheshwari fabrics, and Bell metal art, Mrignayani helps in promoting local crafts, ensuring fair wages for artisans, and preserving the state's rich cultural heritage.

87. (B) Balaghat
The industrial estate of Kirnapur is located in the Balaghat district. It was established to boost local entrepreneurship and provide infrastructure for small-scale industries in this mineral and forest-

distribution across the fertile agricultural belts of central Madhya Pradesh, benefiting the local farming community.

54. (C) Ujjain
Ujjain is home to the largest soybean extraction plant in Asia, reflecting the city's central role in the state's soybean industry. This massive facility processes large volumes of soybean to produce edible oil and high-protein soy meal for domestic and international markets. Its presence highlights the industrial capability of Madhya Pradesh in adding value to its primary agricultural produce on a global scale.

55. (A) Firozabad
The glass industry in northern Madhya Pradesh, particularly in Gwalior and Morena, is influenced by the proximity to Firozabad in Uttar Pradesh. Firozabad is nationally famous for its glass production, especially bangles and glassware. This geographic proximity allows for the exchange of skilled labor, raw materials, and technical knowledge, fostering the growth of glass manufacturing units in the bordering districts of the state.

56. (A) Indore
Crystal IT Park in Indore was the first functioning Information Technology Special Economic Zone in Madhya Pradesh. It was designed to provide world-class infrastructure and tax incentives to attract leading IT and BPO companies. The success of this park paved the way for Indore to become a major digital hub, creating thousands of high-tech jobs and boosting the state's software export earnings.

57. (A) Vidisha
Ganj Basoda, located in the Vidisha district, is well-known for its vanaspati ghee industry. The town hosts major manufacturing plants that process vegetable oils into hydrogenated fat, which is widely used in Indian cooking. This agro-based industry leverages the local production of oilseeds and provides a reliable supply of essential cooking medium to the markets in central Madhya Pradesh and beyond.

58. (B) I, III and IV only
The pharmaceutical sector in Madhya Pradesh is a modern, high-growth industry centered in Indore, Pithampur, and Dewas. These areas host Special Economic Zones and packaging clusters that support large-scale production. The state policy specifically encourages the manufacture of modern medicines and active ingredients through subsidies. The sector is not restricted to traditional Ayurveda but is a major producer of advanced allopathic medicines.

59. (C) Sagar
Sagar district is recognized as the largest center for bidi production in Madhya Pradesh. The region's extensive forests provide an abundant supply of tendu leaves, which are essential for wrapping bidis. This industry is a major source of livelihood for thousands of local workers and families. The concentration of units in Sagar makes it a critical hub for the collection, processing, and distribution of bidis.

60. (B) Narmadapuram
The Security Paper Mill is situated in Narmadapuram, formerly known as Hoshangabad. This vital central government facility produces high-security paper used for printing Indian currency notes and other important government documents. Its location was chosen for its secure environment and proximity to necessary water and power resources. The paper produced here meets rigorous international standards for durability and anti-counterfeiting features.

61. (C) Promoting exports and investment through targeted tax incentives
Special Economic Zones are established to act as engines of economic growth by providing a business-friendly environment with minimal regulations. The primary objective is to boost exports, attract foreign and domestic investment, and generate employment. Units within these zones enjoy various tax exemptions and single-window clearances, making them highly competitive in global markets and encouraging the development of modern industrial infrastructure.

62. (A) 2016
In the year twenty sixteen, the Government of Madhya Pradesh established a dedicated Micro, Small and Medium Enterprises Department. This move was intended to provide focused

Downloaded from www.pdf.tube

96. (B) MP MSME Revival and Rehabilitation Scheme
The state government launched the MSME Revival and Rehabilitation Scheme to provide support to industrial units facing financial or operational distress. This scheme offers various measures, such as restructuring of loans and additional fiscal assistance, to help these units become viable again. By reviving sick industries, the government aims to protect local employment and ensure that the invested capital and infrastructure are utilized effectively.

97. (D) Chhindwara
The Borgaon industrial center is located in the Chhindwara district. It was developed to promote industrial growth in this region, which is rich in forest and agricultural resources. The center hosts a variety of units, including food processing and general manufacturing. Its presence helps in creating non-agricultural jobs and contributes to the overall economic development of the southern parts of Madhya Pradesh.

98. (A) Bhopal and Raisen (Mandideep)
Bhopal and the nearby Mandideep industrial area in Raisen district are major centers for tractor manufacturing. These facilities produce high-quality agricultural machinery used across India. The presence of large manufacturers like Eicher and TAFE in this region supports the state's agricultural economy by providing modern equipment. This concentration of tractor units also fosters a network of local engineering ancillary businesses in the central region.

99. (A) Both A and R are true and R is the correct explanation of A.
Pithampur hosts a vast network of ancillary units that manufacture specific components like gears and batteries for larger automobile plants. These smaller units benefit from being close to the original equipment manufacturers, as it reduces logistics costs and ensures a steady market for their products. This proximity is a logical industrial strategy that strengthens the entire cluster's efficiency and fosters deep regional specialization.

100. (C) Export-oriented manufacturing
Sector Three of the Pithampur industrial region is designated as a Special Economic Zone. The primary focus of this zone is to encourage export-oriented manufacturing by providing various tax incentives and duty exemptions. Units within this SEZ produce goods for international markets, contributing significantly to the state's export revenue. This specialized zone helps Madhya Pradesh compete globally in sectors like pharmaceuticals, automobiles, and general engineering.

101. (A) Ranbaxy (now Sun Pharma)
Ranbaxy, which has since been integrated into Sun Pharmaceutical Industries, has historically maintained large-scale manufacturing operations in Dewas. This facility is a key part of the city's pharmaceutical cluster, producing various drugs for domestic and international consumption. The presence of such major companies has made Dewas a significant center for the pharmaceutical industry, providing high-skilled employment and driving the local industrial economy.

102. (A) To decentralise industrial growth and provide employment in tribal districts
Establishing industrial clusters like Maneri in the Mandla district is part of a strategy to decentralize industrial growth. By locating units in tribal and less-developed districts, the state aims to provide local employment opportunities and reduce regional economic disparities. This approach helps in utilizing local resources and labor, ensuring that the benefits of industrialization reach the more marginalized and rural populations of Madhya Pradesh.

103. (B) Neemuch
The Government Alkaloid Works, which processes opium, is situated in the Neemuch district. This specialized facility is one of the few of its kind in India and operates under central government control. Neemuch and surrounding areas are licensed for opium poppy cultivation, providing the raw material for the factory. The alkaloids produced here are used in the pharmaceutical industry for manufacturing essential medicines.

104. (D) Agro and food processing
Agro and food processing units constitute the largest portion of registered MSMEs in Madhya Pradesh. Given the state's strong agricultural base and diverse crop production, there are

NODIA

true, the general objective of the corridor across several states does not specifically explain the administrative reason why a particular section was routed through Madhya Pradesh territory.

71. (A) I, II and IV only
Special Economic Zones in Madhya Pradesh offer various incentives, including electricity duty exemptions and single-window clearances. These units are treated as foreign territory for trade and duty purposes to encourage exports. Contrary to the claim of having no functional IT SEZs, the state has successful facilities like the Crystal IT Park in Indore, which has been operational and supporting the software sector for many years.

72. (B) Bhopal
The traditional craft of Zari-Zardozi is an intricate art of gold and silver thread embroidery that is deeply rooted in the cultural heritage of Bhopal. This craft flourished under the patronage of the Nawabs and continues to be a significant part of the city's identity. Local artisans create beautiful designs on fabrics for garments and accessories, making Bhopal a renowned center for this exquisite and ancient handicraft.

73. (D) It provides employment and wealth distribution at lower capital costs
The MSME sector is crucial for Madhya Pradesh because it generates significant employment opportunities with relatively low capital investment. These smaller units promote equitable wealth distribution and encourage local entrepreneurship across both urban and rural areas. By focusing on labor-intensive processes and utilizing local resources, MSMEs help in reducing regional imbalances and foster inclusive economic growth throughout the various districts of the state.

74. (C) Punj Lloyd Small Arms Manufacturing Plant
The Malanpur industrial area hosts a prominent defense facility established through a joint venture involving Punj Lloyd. This plant is dedicated to the manufacturing of small arms and related defense equipment. It represents the growing private sector participation in India's defense manufacturing landscape. The facility utilizes advanced technology to produce high-quality weapons, contributing to the state's reputation as an emerging hub for strategic and defense-related industries.

75. (D) Seoni
Seoni district is often referred to as the Lucknow of Madhya Pradesh because of its significant silk production. The region has a favorable environment for sericulture, leading to the development of a local silk-weaving industry. The high quality of silk produced here is compared to the famous textiles of Lucknow. This activity provides sustainable livelihoods for many local families and contributes to the state's diverse textile heritage.

76. (D) Itarsi
Itarsi is a major railway junction that has become a center for forest-based industries, particularly plywood and timber processing. Its strategic location allows for the efficient transportation of raw timber from the surrounding forest regions and the distribution of finished products across India. The presence of numerous sawmills and plywood manufacturing units in and around Itarsi makes it a vital node for the state's forest-based industrial sector.

77. (D) To facilitate customs clearance and handle regional export-import cargo
The Inland Container Depot in Pithampur serves as a dry port for the landlocked state of Madhya Pradesh. Its primary function is to provide customs clearance and logistics facilities for international trade. By allowing containers to be processed inland, it reduces the need for businesses to travel to distant seports for paperwork. This facility is essential for supporting the export-oriented manufacturing units located in the Pithampur industrial cluster.

78. (D) Pithampur SEZ, Dhar
Pithampur SEZ was the first greenfield Special Economic Zone established in Madhya Pradesh to boost manufacturing and exports. Located in the Dhar district, it offers world-class infrastructure and various fiscal incentives to attract global investors. This zone has been instrumental in making the state a manufacturing hub, particularly in the automobile and pharmaceutical sectors, by providing a specialized environment designed specifically for export-focused industrial operations.

Click Here to Buy book on Amazon

113. (C) MP Audyogik Kendra Vikas Nigam (AKVN)
The Audyogik Kendra Vikas Nigams were established specifically to develop and manage industrial infrastructure across different regions of Madhya Pradesh. They are responsible for creating industrial areas, constructing sheds, and providing essential utilities like water and power to factories. By developing these ready-to-use sites, AKVNs simplify the process for entrepreneurs to set up new units, thereby accelerating the industrialization process in the state.

114. (B) Cement manufacturing
Sugar production, soya oil extraction, and cotton textiles are all agro-based industries because they rely on agricultural crops like sugarcane, soybean, and cotton. Cement manufacturing, however, is a mineral-based industry as its primary raw materials are limestone and clay. This distinction is important for understanding how different industries are categorized based on their source of raw materials and their specific location requirements.

115. (D) Grouping related enterprises to build shared infrastructure and supply chains
The Cluster Development Approach for MSMEs involves grouping related businesses in a specific geographical area. This strategy allows for the creation of shared infrastructure, such as testing laboratories, common effluent treatment plants, and improved logistics. By working together in clusters, small enterprises can benefit from economies of scale, better access to modern technology, and more efficient supply chains, making them more competitive in the market.

116. (D) Narmadapuram
The Babai industrial estate is situated in the Narmadapuram district, formerly known as Hoshangabad. It has been developed as a hub for agro-processing and related industries, taking advantage of the fertile agricultural lands in the Narmada valley. The estate provides the necessary facilities for businesses to process local crops, contributing to value addition and creating employment opportunities for the rural population in central Madhya Pradesh.

117. (D) An industry that can be located at any site regardless of factors
A footloose industry is one that is not tied to a specific location due to raw material or market constraints. These industries, like electronics or software services, typically use lightweight components and do not require heavy infrastructure. Consequently, they can be located in any site with good connectivity and available labor. The electronics units in Indore are examples, as they depend more on technical skills than proximity to mines.

NODIA

118. (A) Both A and R are true and R is the correct explanation of A.
The Mandideep industrial area saw rapid development due to its strategic location near the capital city, Bhopal. This proximity provided businesses with easy access to administrative support, essential infrastructure, and excellent road and rail connectivity. The growth of Mandideep demonstrates how being close to a major urban and administrative center can act as a significant driver for successful industrialization and investment in a region.

119. (A) Availability of tendu leaves and affordable local labour
The concentration of the bidi industry in the Sagar and Jabalpur divisions is primarily due to the local abundance of tendu leaves and the availability of manual labor. Tendu leaves, harvested from the region's forests, are essential for wrapping bidis. This labor-intensive cottage industry thrives where these resources are easily accessible, providing a critical source of income for rural communities in these specific geographical belts of the state.

120. (A) Showcase sector opportunities and sign MoUs for state investment
Invest MP summits are high-profile events designed to showcase the industrial potential and sectoral opportunities of Madhya Pradesh to global and domestic investors. During these summits, the state government signs Memorandums of Understanding with various companies for new projects. These events help in building the state's brand, attracting foreign direct investment, and initiating policy dialogues to improve the overall business climate and industrial growth.

121. (A) Horticulture produce
The food processing sector, especially for horticulture produce like fruits and vegetables, is highly dependent on robust cold chain infrastructure. Since these items are perishable, facilities such as cold storage and refrigerated transport are essential to maintain quality and extend shelf life for export. Developing such infrastructure in food parks allows Madhya Pradesh to successfully market its diverse horticultural output to distant domestic and international markets.

122. (D) Singrauli
Baidhan, known as the energy capital of Madhya Pradesh, is located in the Singrauli district. This region is home to massive coal deposits and several large-scale thermal power plants operated by companies like NTPC. The heavy concentration of power generation units in this area provides essential electricity for industries across the state and country, making Singrauli a vital hub for the nation's energy security and industrial operations.

123. (C) Competition from powerloom imitations and synthetic fabrics
Despite having a Geographical Indication tag, handloom weavers in Chanderi and Maheshwar face significant economic challenges due to competition from cheaper powerloom imitations. These mass-produced fabrics often mimic traditional designs using synthetic fibers, making them more affordable but less authentic. This competition undermines the market for genuine hand-woven products, making it difficult for traditional artisans to maintain their livelihoods and preserve their ancient weaving techniques.

124. (B) MP Power Generating Company Limited (MPPGCL)
The Madhya Pradesh Power Generating Company Limited is the primary state-owned entity responsible for generating electricity from thermal and hydel sources. It operates several power plants across the state to ensure a reliable supply of energy for both domestic and industrial use. Robust power availability is a key factor in attracting industrial investment, and MPPGCL plays a critical role in supporting the state's manufacturing and economic growth.

125. (C) Tikamgarh
Tikamgarh is famously associated with the brass and bell metal craft known as Dhokra art. Artisans in this region use the traditional lost-wax casting technique to create intricate metal sculptures and decorative items. This ancient craft is an important part of the state's cultural heritage and provides a livelihood for many local artisan families. Tikamgarh remains a major center for the production and trade of these unique metal handicrafts.

126. (A) Data centres and electronic system design
Data centres and electronic system design are non-traditional, emerging industries in Madhya Pradesh, supported by modern state IT policies. These high-tech sectors represent a shift toward a digital economy, leveraging the state's surplus power and technical workforce. By encouraging investments in these areas, particularly in cities like Indore and Bhopal, the government aims to create high-value jobs and position the state as a future hub for digital infrastructure.

127. (B) Silica sand - Glass Industry
Silica sand is the essential raw material for the glass industry, and its availability in regions like Gwalior and Morena has led to the concentration of glass manufacturing units there. While other minerals like bauxite and limestone are used for aluminum and cement respectively, silica sand is unique to glass production. This association highlights how the geological distribution of specific minerals dictates the location and growth of various industries across Madhya Pradesh.

128. (A) Both Statement I and II are true and II explains I
Madhya Pradesh is a landlocked state, which means it lacks direct access to sea routes for international trade. To compensate for this geographical disadvantage, the state has developed robust Inland Container Depots and dry ports. These facilities allow for customs clearance and container handling within the state, effectively bringing port services inland and facilitating the efficient export and import of goods for local manufacturing units and businesses.

Downloaded from www.pdf.tube

129. (B) Catalyst for policy reforms, global branding, and FDI inflow
Invest MP summits act as a major catalyst for economic growth by encouraging policy reforms and global branding of the state. These events attract significant Foreign Direct Investment and domestic capital into various sectors including manufacturing and IT. By bringing together government officials and corporate leaders, the summits help in creating a more business-friendly environment and identifying new avenues for industrial development throughout Madhya Pradesh.

130. (A) Cluster providing design, stitching, and export facilities for apparel
The Readymade Garment Complex in Indore is a specialized cluster designed to support the apparel industry. It provides comprehensive facilities for the design, stitching, and finishing of garments, along with dedicated space for export operations. By grouping these activities together, the complex helps local manufacturers improve quality and efficiency. This cluster leverages Indore's historical strength in textiles to make the city a modern hub for the national and international garment trade.

NODIA

(A) Presence of a Municipal Corporation or Cantonment Board
(B) A minimum population of 5,000
(C) At least 75 percent of the male main working population engaged in non-agricultural pursuits
(D) A population density of at least 400 persons per square kilometer

87. Which is the largest Urban Agglomeration in Madhya Pradesh by population (2011 Census)?
(A) Bhopal UA
(B) Indore UA
(C) Jabalpur UA
(D) Gwalior UA

88. Consider the following statements regarding seasonal migration among the tribal population in Madhya Pradesh:
I. Seasonal migration is primarily a "pull" driven phenomenon due to the high agricultural prosperity in their native districts.
II. It often disrupts the education of tribal children and affects their nutritional status.
III. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was intended to reduce such distress migration.
Which of the above statement(s) is/are incorrect?
(A) II only
(B) I only
(C) I and III only
(D) II and III only

89. Ujjain's urban characteristics and economy are predominantly driven by which functional classification?
(A) Information Technology hub
(B) Religious, cultural, and pilgrimage center
(C) Heavy metallurgy and mining
(D) Administrative capital

90. How many million-plus (population exceeding 10 lakhs) cities/urban agglomerations were there in Madhya Pradesh as per the 2011 Census?
(A) 2
(B) 3
(C) 4
(D) 6

91. Which of the following acts as the strongest 'Pull Factor' for rural-to-urban migration in Madhya Pradesh?
(A) Mechanization of local agriculture
(B) Better employment and higher urban wages
(C) Drought conditions in remote villages
(D) Fragmentation of rural landholdings

92. Which of the following is NOT a consequence of rapid urbanization in Madhya Pradesh?
(A) Encroachment on agricultural land
(B) Increase in urban heat island effect
(C) Equal distribution of wealth among all urban dwellers
(D) Strain on municipal water supply systems

93. A high proportion of slum population in cities like Bhopal and Indore is a direct consequence of which of the following?
(A) International migration trends
(B) Depopulation of core city areas
(C) Unplanned migration and housing lacks
(D) Strict zoning laws banning buildings

94. Match the following urban or demographic schemes in List I with their core objectives in List II:
List I: (Scheme)
P. AMRUT
Q. Swachh Bharat Mission (Urban)
R. PMAY (Urban)
S. Smart Cities Mission
List II: (Core Objective)
1. Affordable housing for all
2. Basic civic amenities and water supply
3. IT-driven modern urban infrastructure
4. Open Defecation Free and solid waste management
(A) P-4, Q-2, R-3, S-1
(B) P-1, Q-3, R-2, S-4
(C) P-2, Q-4, R-1, S-3
(D) P-2, Q-1, R-4, S-3

95. The "Laadli Laxmi Yojana" implemented by the Government of Madhya Pradesh primarily aims to improve which demographic indicator?
(A) Adult male literacy statistics
(B) Child Sex Ratio and social attitudes
(C) Life expectancy of the elderly
(D) Rural-urban migration rate

Click Here to Buy book on Amazon

11. Consider the following statements regarding the population of Madhya Pradesh:
I. Jhabua has the lowest Scheduled Caste (SC) population percentage in the state.
II. Madhya Pradesh has the highest absolute Scheduled Tribe (ST) population in India.
III. The sex ratio among the Scheduled Tribes in Madhya Pradesh is lower than the state's overall average sex ratio.
IV. Indore has the lowest absolute number of Scheduled Tribe population in the state.
Which of the above statement(s) is/are incorrect?
(A) I and II only
(B) II and III only
(C) I and IV only
(D) III and IV only

12. During which census decade did Madhya Pradesh record its highest ever population growth rate?
(A) 1951-1961
(B) 1971-1981
(C) 1961-1971
(D) 1991-2001

13. Find the odd one out among the districts with a sex ratio of more than 1000 females per 1000 males in Madhya Pradesh.
(A) Jhabua
(B) Balaghat
(C) Alirajpur
(D) Mandla

14. Which region of Madhya Pradesh generally exhibits higher Infant Mortality Rates due to rugged terrain and limited access to healthcare?
(A) Malwa Plateau region
(B) Narmada Valley region
(C) Eastern tribal belt
(D) Central India Plateau

15. What percentage of the total population of Madhya Pradesh belongs to the Scheduled Castes (SC) as per the 2011 Census?
(A) 21.1 percent
(B) 17.5 percent
(C) 19.3 percent
(D) 15.6 percent

16. In terms of total population, what was the rank of Madhya Pradesh among Indian states as per the 2011 Census (prior to the formation of Telangana)?
(A) Sixth
(B) Fourth
(C) Fifth
(D) Seventh

17. Which district holds the record for the highest female literacy rate in Madhya Pradesh (2011 Census)?
(A) Bhopal
(B) Jabalpur
(C) Indore
(D) Gwalior

18. The natural growth rate of a population is determined by which of the following?
(A) The difference between birth rate and death rate
(B) The difference between in-migration and out-migration
(C) The sum of total birth rate and incoming migration
(D) The total fertility rate minus infant mortality rate

19. Which district in Madhya Pradesh recorded the lowest Child Sex Ratio (0-6 years) in the 2011 Census?
(A) Gwalior
(B) Bhind
(C) Rewa
(D) Morena

20. Match the following demographic indicators of Madhya Pradesh (2011) with their respective census values:
List I: (Demographic Indicator)
P. Sex Ratio
Q. Child Sex Ratio (0-6 years)
R. Population Density
S. Literacy Rate
List II: (Census Value)
1. 236
2. 918
3. 931
4. 69.32%
(A) P-3, Q-2, R-1, S-4
(B) P-2, Q-3, R-1, S-4
(C) P-3, Q-2, R-4, S-1
(D) P-1, Q-2, R-3, S-4

Downloaded from www.pdf.tube

small geographical area but hosts the highly urbanized state capital with significant administrative and commercial functions.
In the context of the above, which one of the following is correct?
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

65. Which district in Madhya Pradesh has the lowest percentage of urban population?
(A) Dindori
(B) Alirajpur
(C) Sidhi
(D) Jhabua

66. Which of the following cities from Madhya Pradesh is NOT included in the Smart Cities Mission?
(A) Rewa
(B) Sagar
(C) Satna
(D) Ujjain

67. What is the most significant cause of rural-to-rural female migration in Madhya Pradesh?
(A) Education
(B) Employment in agriculture
(C) Marriage
(D) Business opportunities

68. Which of the following is NOT one of the million-plus cities of Madhya Pradesh as per the 2011 Census?
(A) Indore
(B) Ujjain
(C) Bhopal
(D) Jabalpur

69. Which major event periodically strains and accelerates the development of urban infrastructure in Ujjain?
(A) Simhastha Kumbh Mela
(B) Khajuraho Dance Festival
(C) Tansen Samaroh
(D) Lokrang Festival

70. Which district in Madhya Pradesh has the highest urban population in absolute numbers?
(A) Bhopal
(B) Gwalior
(C) Indore
(D) Jabalpur

71. Consider the following statements regarding Indore:
I. It is the most populous city in Madhya Pradesh.
II. It has the highest overall literacy rate among all districts in the state.
III. It is part of the Smart Cities Mission.
IV. It hosts major industrial clusters like Pithampur in its vicinity.
Which of the above statement(s) is/are correct?
(A) I, III and IV
(B) I, II and III
(C) II, III and IV
(D) I, II, III and IV

72. Over the last few decades, the trend of the urban population percentage in Madhya Pradesh shows:
(A) A decline
(B) A steady and continuous increase
(C) Stagnation with no growth
(D) High fluctuation every alternate decade

NODIA

73. Which city is widely regarded as the commercial and industrial capital of Madhya Pradesh?
(A) Bhopal
(B) Jabalpur
(C) Satna
(D) Indore

74. In the Indian Census classification, a "Class I city" is defined as an urban center with a minimum population of:
(A) 50,000
(B) 1,00,000
(C) 5,00,000
(D) 10,00,000

75. Under the Government of India's 'Smart Cities Mission', how many cities from Madhya Pradesh have been selected?
(A) 5
(B) 7
(C) 9

32. How does the population density of Madhya Pradesh compare with the national average of India (2011 Census)?
(A) It is exactly equal to the national average.
(B) It is slightly higher than the national average.
(C) It is significantly lower than the national average.
(D) It is more than double the national average.

33. Identify the correct pair of district and its demographic distinction in Madhya Pradesh.
(A) Bhind - Highest proportion of ST population
(B) Alirajpur - Highest proportion of ST population
(C) Ujjain - Lowest proportion of SC population
(D) Dindori - Highest proportion of SC population

34. Match the districts in List I with their population density per square kilometer in 2011 in List II:
List I: (District)
P. Indore
Q. Jabalpur
R. Sheopur
S. Panna
List II: (Population Density)
1. 171
2. 142
3. 841
4. 473
(A) P-3, Q-4, R-2, S-1
(B) P-4, Q-3, R-2, S-1
(C) P-1, Q-2, R-3, S-4
(D) P-3, Q-4, R-1, S-2

35. Which religious minority community has the highest literacy rate in Madhya Pradesh?
(A) Jains
(B) Muslims
(C) Christians
(D) Sikhs

36. Out-migration from the Bundelkhand region of Madhya Pradesh is primarily driven by which of the following factors?
(A) Recurrent droughts and lack of employment
(B) Extreme cold climate
(C) Political instability
(D) Establishment of large IT parks

37. According to the 2011 Census, what is the percentage of the Scheduled Tribe (ST) population in Madhya Pradesh?
(A) 21.1 percent
(B) 15.6 percent
(C) 19.4 percent
(D) 24.5 percent

38. Among the working population of Madhya Pradesh, the largest proportion is engaged in which sector?
(A) Manufacturing and secondary industrial processing
(B) Services, retail trade, and hospitality sectors
(C) Construction and urban infrastructure development
(D) Cultivation and Agricultural Labour

39. Which district in Madhya Pradesh has the lowest population density?
(A) Panna
(B) Sheopur
(C) Chhatarpur
(D) Dindori

40. After Hinduism, which is the second largest religious community by population in Madhya Pradesh?
(A) Jainism
(B) Christianity
(C) Buddhism
(D) Islam

41. Arrange the following districts of Madhya Pradesh in descending order of their population density (highest to lowest) and select the correct option.
1. Jabalpur
2. Bhopal
3. Indore
4. Gwalior
(A) 3, 2, 1, 4
(B) 2, 3, 1, 4
(C) 2, 3, 4, 1
(D) 3, 2, 4, 1

42. Match the tribes in List I with their major regions or districts of concentration in Madhya Pradesh in List II:
List I: (Tribe)
P. Bhil

Click Here to Buy book on Amazon

21. Which district has the highest absolute number of Scheduled Caste (SC) population in Madhya Pradesh?
(A) Ujjain
(B) Sagar
(C) Indore
(D) Chhatarpur

22. Which of the following districts recorded the lowest decadal population growth rate during 2001-2011?
(A) Betul
(B) Anuppur
(C) Chhindwara
(D) Balaghat

23. Which of the following best describes the current trend of the Crude Death Rate (CDR) in Madhya Pradesh over the last two decades?
(A) Rapid increase due to the rise of modern lifestyle diseases
(B) Stagnation at the level of current national average values
(C) Fluctuating widely with no distinct or clear regional trend
(D) Steady decline due to improved healthcare facilities

24. Which district has the highest overall literacy rate in Madhya Pradesh?
(A) Indore
(B) Bhopal
(C) Balaghat
(D) Jabalpur

25. The overall sex ratio of Madhya Pradesh according to the 2011 Census is:
(A) 943
(B) 931
(C) 918
(D) 912

26. Identify the incorrect statement regarding the demographic profile of Madhya Pradesh.
(A) The rural population comprises approximately 72.4 percent of the total residents.
(B) The urban population accounts for approximately 27.6 percent of the state total.
(C) The male population currently outnumbers the female population within the state.
(D) The state holds 8 percent of India's population and 8 percent of its land area.

27. Which of the following districts has the lowest overall literacy rate in Madhya Pradesh?
(A) Alirajpur
(B) Jhabua
(C) Barwani
(D) Sheopur

28. Consider the following statements regarding the decadal growth rate of Madhya Pradesh (2001-2011):
I. The rural decadal growth rate was higher than the urban decadal growth rate.
II. The overall decadal growth rate of the state was higher than the national average.
III. Indore district recorded a decadal growth rate of over 30 percent.
Which of the above statement(s) is/are correct?
(A) II and III only
(B) I and II only
(C) I and III only
(D) I, II and III

29. What was the overall literacy rate of Madhya Pradesh as per the 2011 Census?
(A) 73.00 percent
(B) 78.73 percent
(C) 69.32 percent
(D) 65.40 percent

30. What does Total Fertility Rate (TFR) indicate in the context of Madhya Pradesh's demography?
(A) The total number of live births recorded per thousand population
(B) The ratio of all successful births to the total pregnancies recorded
(C) The percentage of married women within the reproductive age group
(D) The average number of children born to a woman during her lifetime

31. The Korku tribe is predominantly found in which geographical region of Madhya Pradesh?
(A) Northern districts like Morena and Bhind
(B) Eastern districts like Rewa and Sidhi
(C) Southern districts like Betul and Khandwa
(D) Western districts like Jhabua and Alirajpur

NODIA

(D) Korku

53. In terms of religious composition, what is the approximate percentage of the Hindu population in Madhya Pradesh as per the 2011 Census?
(A) 85.6 percent
(B) 82.3 percent
(C) 90.8 percent
(D) 94.1 percent

54. Identify the correct pair of district and its population density category in Madhya Pradesh.
(A) Bhopal - Low Density
(B) Dindori - High Density
(C) Indore - High Density
(D) Jabalpur - Low Density

55. Which of the following categories forms the major part of the 'non-working population' in Madhya Pradesh?
(A) Full-time students and household dependents
(B) Retired professionals and government pensioners
(C) Unemployed youth actively seeking new jobs
(D) Marginal workers employed for part of the year

56. Which of the following is the largest tribal group in Madhya Pradesh by population size?
(A) Bhil
(B) Gond
(C) Baiga
(D) Sahariya

57. Which geographic zone of Madhya Pradesh generally exhibits a sparse population distribution?
(A) Baghelkhand Plateau
(B) Malwa Plateau
(C) Narmada-Son Valley
(D) Madhya Bharat Plateau

58. Select the correct order of the major tribal groups in Madhya Pradesh arranged in descending order of their population size.
(A) Bhil, Gond, Kol, Korku
(B) Gond, Bhil, Kol, Korku
(C) Bhil, Gond, Korku, Kol
(D) Gond, Bhil, Korku, Kol

59. Which district in Madhya Pradesh has the highest population density?
(A) Indore
(B) Jabalpur
(C) Bhopal
(D) Gwalior

60. A declining dependency ratio in Madhya Pradesh indicates an opportunity for which of the following?
(A) Population explosion
(B) Demographic dividend
(C) Brain drain
(D) Increased infant mortality

61. Areas with a Municipality, Corporation, Cantonment Board, or Notified Town Area Committee are classified by the Census of India as:
(A) Census Towns
(B) Urban Agglomerations
(C) Statutory Towns
(D) Mega Cities

62. Jabalpur is historically and currently known for which of the following urban functions?
(A) Education, defense, and legal administration
(B) Major port and international shipping activities
(C) Large-scale automobile manufacturing exclusively
(D) International financial services and stock exchange

63. "Brain Drain" in the context of urban Madhya Pradesh refers to:
(A) Out-migration of highly skilled professionals
(B) Migration of unskilled laborers to other states
(C) Movement of industries from urban to rural areas
(D) Shift of agricultural workers to the construction sector

64. Given below are two statements, one labelled as Assertion (A) and the other as Reason (R).
Assertion (A): Bhopal district has the highest population density in Madhya Pradesh.
Reason (R): Bhopal encompasses a relatively

Downloaded from www.pdf.tube

CHAPTER 16
Population and Urbanisation

1. What was the overall decadal population growth rate of Madhya Pradesh from 2001 to 2011?
(A) 24.26 percent
(B) 17.64 percent
(C) 22.50 percent
(D) 20.35 percent

2. Which district in Madhya Pradesh has the lowest overall sex ratio as per the 2011 Census?
(A) Morena
(B) Gwalior
(C) Bhind
(D) Datia

3. What percentage of India's total population resides in Madhya Pradesh according to the 2011 Census?
(A) 6.25 percent
(B) 7.15 percent
(C) 5.99 percent
(D) 4.85 percent

4. Given below are two statements, one labelled as Assertion (A) and the other as Reason (R).
Assertion (A): Balaghat district has the highest sex ratio in Madhya Pradesh.
Reason (R): It has a dominant tribal population where socio-cultural practices do not heavily discriminate against the girl child, and there is significant male out-migration for work.
In the context of the above, which one of the following is correct?
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

5. Infant Mortality Rate (IMR) is defined as the number of infant deaths per how many live births in a given year?
(A) 100
(B) 1,000
(C) 10,000
(D) 1,00,000

6. Which district in Madhya Pradesh has the highest percentage of Scheduled Caste (SC) population relative to its total population?
(A) Indore
(B) Ujjain
(C) Datia
(D) Tikamgarh

7. According to the Census of 2011, what is the total population of Madhya Pradesh?
(A) 6,26,26,809
(B) 7,26,26,809
(C) 8,26,26,809
(D) 7,56,26,809

8. In the theory of demographic transition, Madhya Pradesh is currently transitioning through which stage?
(A) First stage (High birth rate, high death rate)
(B) Second stage (High birth rate, falling death rate)
(C) Third stage (Falling birth rate, low death rate)
(D) Fourth stage (Low birth rate, low death rate)

9. What is the approximate difference between the male and female literacy rates in Madhya Pradesh according to the 2011 Census?
(A) 10 percent
(B) 15 percent
(C) 20 percent
(D) 25 percent

10. Which district in Madhya Pradesh registered the highest decadal population growth rate (2001-2011)?
(A) Bhopal
(B) Jhabua
(C) Indore
(D) Dhar

NODIA

(D) 11

76. Which tribal groups in western Madhya Pradesh are highly prone to seasonal migration to neighboring states like Gujarat and Rajasthan for wage labor?
(A) Baiga and Gond
(B) Sahariya and Bharia
(C) Kol and Panika
(D) Bhil and Bhilala

77. Which of the following best describes an "Urban Agglomeration" in the context of the Indian Census?
(A) A single statutory town with a population of exactly 1 million residents
(B) An urban spread comprising a town and its adjoining urban outgrowths
(C) A rural area notified by the state for future industrial development zones
(D) A cluster of villages that have reached a density of 400 people per sq km

78. Approximately how many statutory and census towns were recorded in Madhya Pradesh in the 2011 Census?
(A) Less than 200
(B) Between 200 and 300
(C) Between 350 and 500
(D) More than 600

79. Gwalior's historical urban landscape is primarily characterized by its heritage. Which nearby industrial area has significantly boosted its modern urban industrial importance?
(A) Pithampur
(B) Malanpur
(C) Mandideep
(D) Maneri

80. Match the following features in List I with their corresponding districts in List II:
List I: (District Feature)
P. Highest Urban Population (Absolute)
Q. Highest Urban Population (Percentage)
R. Lowest Urban Population (Percentage)
S. Lowest SC Population (Percentage)
List II: (District Name)
1. Dindori
2. Bhopal
3. Indore
4. Jhabua
(A) P-2, Q-3, R-4, S-1
(B) P-3, Q-1, R-2, S-4
(C) P-4, Q-2, R-1, S-3
(D) P-3, Q-2, R-1, S-4

81. Which city from Madhya Pradesh frequently secures the first rank in the Swachh Survekshan (Cleanliness Survey) driven by efficient urban solid waste management?
(A) Bhopal
(B) Ujjain
(C) Indore
(D) Khargone

82. According to the 2011 Census, what is the percentage of the urban population in Madhya Pradesh?
(A) 22.4 percent
(B) 27.6 percent
(C) 25.2 percent
(D) 31.1 percent

83. Which district in Madhya Pradesh is the most urbanized, having the highest percentage of urban population to its total population?
(A) Indore
(B) Gwalior
(C) Ujjain
(D) Bhopal

84. The prospect of developing a "Mega City" corridor in Madhya Pradesh is most strongly associated with which of the following urban agglomerations?
(A) Gwalior-Bhind-Morena
(B) Jabalpur-Mandla-Dindori
(C) Indore-Pithampur-Ujjain
(D) Rewa-Satna-Sidhi

85. Which city serves as the administrative capital of Madhya Pradesh and has grown rapidly due to tertiary sector expansion?
(A) Indore
(B) Gwalior
(C) Bhopal
(D) Jabalpur

86. As per the Census of India, which of the following is NOT a mandatory criterion for an area to be classified as a Census Town?

Click Here to Buy book on Amazon

Q. Sahariya
R. Baiga
S. Bharia

List II: (Major Region/District)
1. Patalkot (Chhindwara)
2. Mandla and Dindori
3. Gwalior, Shivpuri, Guna
4. Jhabua, Alirajpur, Dhar

(A) P-3, Q-4, R-1, S-2
(B) P-4, Q-2, R-3, S-1
(C) P-4, Q-3, R-2, S-1
(D) P-1, Q-3, R-2, S-4

43. What is the population density of Madhya Pradesh (persons per square kilometer) according to the 2011 Census?
(A) 196
(B) 236
(C) 282
(D) 382

44. What does the term "dependency ratio" refer to in the context of Madhya Pradesh's age structure?
(A) The ratio of the rural residents compared to those in urban areas
(B) The ratio of non-working females compared to working male adults
(C) The ratio of agricultural laborers compared to primary cultivators
(D) The ratio of children and elderly to the working-age population

45. Which factor is LEAST responsible for the high population density in the Malwa region of Madhya Pradesh?
(A) Fertile black soil supporting agriculture
(B) Highly developed industrial corridors
(C) Abundant coastline and port facilities
(D) Favorable climate and moderate rainfall

46. Which of the following states in India has the largest absolute population of Scheduled Tribes?
(A) Maharashtra
(B) Madhya Pradesh
(C) Odisha
(D) Chhattisgarh

47. What is the population density of Bhopal district as per the 2011 Census?
(A) 841 persons/sq km
(B) 855 persons/sq km
(C) 473 persons/sq km
(D) 621 persons/sq km

48. Which district in Madhya Pradesh has the lowest percentage of Scheduled Tribe (ST) population relative to its total population?
(A) Morena
(B) Bhind
(C) Datia
(D) Mandsaur

49. Consider the following statements regarding the age structure and workforce of Madhya Pradesh:
I. A large base of the population pyramid indicates a high proportion of children.
II. The working-age population comprises individuals aged 15 to 59 years.
III. Marginal workers are those who work for more than 183 days in a year.
IV. Madhya Pradesh's economy is characterized by a high proportion of agricultural workers.
V. An increasing proportion of the elderly population decreases the dependency ratio.

Which of the above statement(s) is/are correct?
(A) I, II, and IV only
(B) II, III, and V only
(C) I, III, and IV only
(D) I, II, IV, and V only

50. What is the approximate Work Participation Rate (percentage of total workers to total population) in Madhya Pradesh as per the 2011 Census?
(A) 33.5 percent
(B) 39.8 percent
(C) 43.5 percent
(D) 49.2 percent

51. In the context of Madhya Pradesh, which stream of internal migration has the highest volume?
(A) Rural to Urban
(B) Urban to Urban
(C) Urban to Rural
(D) Rural to Rural

52. Which of the following tribes is NOT classified as a Particularly Vulnerable Tribal Group (PVTG) in Madhya Pradesh?
(A) Baiga
(B) Sahariya
(C) Bharia

NODIA

96. Which statement best describes the "Pull Factors" for migration to cities like Indore and Bhopal?
(A) Agrarian distress in the home district
(B) Better education and employment opportunities
(C) Natural disasters in regional rural areas
(D) Lack of transportation in remote villages

97. In urban Madhya Pradesh, what does the AMRUT scheme primarily focus on?
(A) Rural electrification projects
(B) Heritage conservation of monuments
(C) Agricultural subsidies for farmers
(D) Basic urban infrastructure and services

98. Which of the following cities in Madhya Pradesh is historically famous as the "City of Lakes" and faces the urban challenge of lake conservation amidst rapid urbanization?
(A) Bhopal
(B) Sagar
(C) Indore
(D) Ujjain

99. The highest concentration of the Gond tribe in Madhya Pradesh is found in which region?
(A) Malwa region
(B) Vindhyan and Satpura mountain ranges
(C) Chambal valley
(D) Bundelkhand region

100. What was the primary objective of establishing the State Population Commission in Madhya Pradesh?
(A) To conduct the decadal census operations exclusively
(B) To strictly enforce the two-child norm for all citizens
(C) To review, monitor, and guide the implementation of the State Population Policy
(D) To promote urbanization at the cost of rural development

101. Arrange the following factors in the logical sequence of Cause and Effect concerning rural-to-urban migration in Madhya Pradesh.
1. Crowding and growth of slums in cities
2. Lack of employment in rural agriculture
3. Rural-to-Urban Migration
4. Strain on urban infrastructure
Select the correct order:
(A) 2, 3, 1, 4
(B) 3, 2, 4, 1
(C) 1, 4, 2, 3
(D) 2, 1, 3, 4

102. To address urban transport challenges, Metro Rail projects are currently under implementation in which two cities of Madhya Pradesh?
(A) Bhopal and Indore
(B) Gwalior and Jabalpur
(C) Ujjain and Dewas
(D) Sagar and Satna

103. Which area near Bhopal serves effectively as an industrial satellite town?
(A) Pithampur
(B) Mandideep
(C) Malanpur
(D) Mhow

NODIA

104. Which of the following is an effective long-term strategy mentioned in population policies to control high fertility rates in states like Madhya Pradesh?
(A) Banning rural-to-urban migration
(B) Reducing public health expenditure
(C) Promoting large families through agricultural subsidies
(D) Increasing female literacy and marriage age

105. Which statement best describes the "Push Factors" of migration in rural Madhya Pradesh?
(A) Better educational institutions in local villages
(B) Availability of high-paying jobs in urban zones
(C) Poverty, unemployment, and lack of facilities
(D) Attractive urban lifestyle and city entertainment

106. What is the standard definition of a 'Slum' area as per the Census of India?
(A) Any area with a population density of more than 1000 persons per sq km
(B) A compact area of poorly built tenements in unhygienic conditions
(C) Any urban area that currently lacks a formal municipal corporation

factors contributing to the regional population distribution.

46. (B) Madhya Pradesh
Scheduled Tribes represent a major demographic group in India, with their populations distributed across various states. Madhya Pradesh is home to the largest absolute number of Scheduled Tribe individuals in the country as per the 2011 census. This status necessitates a focus on tribal welfare and development in the state's administrative policies and resource allocation for social justice.

47. (B) 855 persons/sq km
Bhopal district exhibits a high concentration of population due to its status as the state capital and its significant urban development. According to the 2011 census, the population density of the district was recorded at eight hundred fifty-five persons per square kilometer. This high density is a result of a relatively small administrative area supporting a large and growing urban citizenry.

48. (B) Bhind
The distribution of Scheduled Tribes in Madhya Pradesh varies significantly between the southern tribal heartlands and the northern plains. Bhind district, located in the Gwalior-Chambal division, has the lowest percentage of Scheduled Tribe population relative to its total inhabitants. This area is characterized by a different social composition where non-tribal communities form the vast majority of the resident population.

49. (A) I, II, and IV only
Demographics in Madhya Pradesh show a broad-based population pyramid indicating many children, with the working-age group spanning fifteen to fifty-nine years. The economy is heavily agricultural. However, marginal workers are those working less than six months a year, and an increasing elderly population actually raises the dependency ratio. Thus, statements regarding children, the working age, and agriculture are correct.

50. (C) 43.5 percent
The Work Participation Rate is the percentage of total workers, including both main and marginal workers, to the total population. For Madhya Pradesh, the 2011 census estimated this rate to be approximately forty-three point five percent. This figure indicates the proportion of the population actively engaged in economic activities, providing insights into the state's labor market and economic dependency levels.

51. (D) Rural to Rural
Internal migration occurs in various streams, including movement between rural areas and from villages to cities. In Madhya Pradesh, the highest volume of migration is recorded in the rural-to-rural stream. This is largely driven by socio-cultural factors, most notably female migration after marriage, as well as seasonal movements of agricultural laborers between different farming regions within the state.

52. (D) Korku
Particularly Vulnerable Tribal Groups are those indigenous communities identified for special protection due to their declining population, low literacy, and pre-agricultural technology. In Madhya Pradesh, the Baiga, Sahariya, and Bharia tribes are officially classified under this category. While the Korku tribe is a significant tribal group in the state, it does not carry the specific PVTG designation from the government.

53. (C) 90.8 percent
Religious statistics from the 2011 census provide a clear picture of the demographic makeup of Madhya Pradesh. The Hindu community forms the largest religious group, accounting for approximately ninety point eight percent of the total population. This overwhelming majority influences various cultural and social aspects of the state, while the remaining population comprises several minority groups, including Muslims, Jains, and Buddhists.

54. (C) Indore - High Density
Population density categorization in Madhya Pradesh helps in understanding regional urbanization and resource needs. Indore is a clear example of a high-density district due to its large population and status as an economic powerhouse. Conversely, Bhopal is also high density, while districts like Dindori and Panna are low density. Identifying Indore as high density is an accurate demographic classification.

Downloaded from www.pdf.tube

STUDYING FROM PDFs?

THINK AGAIN.

If you are studying only from PDFs,
you are wasting valuable time.

Research shows that learning from

PRINTED BOOKS has up to

4× HIGHER RETENTION

than studying from screens.

PRINT BOOK = BETTER MEMORY

PDF = LOWER RETENTION

Those who study from **PRINTED BOOKS**
move **AHEAD.**

Others are left **BEHIND**
in competition.

In competitive exams,
being average is not enough.

STAY ONE STEP AHEAD.

rural areas

117. Which concept indicates the number of people a region can sustain without environmental degradation, a concern for rapidly urbanizing districts like Indore?
(A) Demographic dividend
(B) Replacement rate
(C) Dependency ratio
(D) Carrying capacity

118. Select the correct sequence of the following cities of Madhya Pradesh arranged in descending order of their population (as per 2011 Census).
(A) Bhopal, Indore, Gwalior, Jabalpur
(B) Indore, Jabalpur, Bhopal, Gwalior
(C) Bhopal, Jabalpur, Indore, Gwalior
(D) Indore, Bhopal, Jabalpur, Gwalior

119. According to the 2011 Census, out of the total population of Madhya Pradesh, approximately what fraction constitutes the tribal population?
(A) One-tenth
(B) One-fifth
(C) One-third
(D) One-fourth

120. Identify the incorrect statement regarding the demographic targets of Madhya Pradesh.
(A) The state policy completely bans family planning sterilizations.
(B) The state aims to achieve the replacement level of Total Fertility Rate (TFR).
(C) Universal immunization of children is a key target.
(D) Reducing maternal mortality ratio (MMR) is a priority.

121. Which demographic indicator of Madhya Pradesh is higher than the national average?
(A) Infant Mortality Rate
(B) Overall Literacy Rate
(C) Population Density
(D) Urbanization Percentage

122. Which division (Mandal) of Madhya Pradesh generally exhibits the highest overall literacy rate?
(A) Indore Division
(B) Rewa Division
(C) Chambal Division
(D) Jabalpur Division

NODIA

123. To tackle the problem of urban slums, the government focuses on "In-situ Slum Redevelopment". What does this mean?
(A) Forcibly evicting slum dwellers to rural areas
(B) Relocating slum dwellers to the outskirts of the city
(C) Redeveloping slums at their original location
(D) Simply providing monetary compensation to dwellers

124. Which scheme in Madhya Pradesh focuses on providing nutritional support to pregnant women and lactating mothers, impacting the state's infant and maternal health indicators?
(A) PM KISAN
(B) Pradhan Mantri Matru Vandana Yojana
(C) Swachh Vidyalaya Abhiyan
(D) Mukhya Mantri Gram Sadak Yojana

125. In Madhya Pradesh, the "Beti Bachao Beti Padhao" campaign is most crucial for which of the following regions exhibiting low child sex ratios?
(A) South-Eastern region
(B) Western (Nimar) region
(C) Northern (Gwalior-Chambal) region
(D) Central (Bhopal) region

126. Under the Census 2011, a person aged 7 years and above who can both read and write with understanding in any language is treated as:
(A) Literate
(B) Educated
(C) Graduate
(D) Scholar

127. What role do ASHA (Accredited Social Health Activist) workers play in shaping Madhya Pradesh's demographics?
(A) They conduct the decadal census operations exclusively.
(B) They work at the grassroots level to improve maternal and child health, thereby reducing MMR and IMR.
(C) They are responsible for urban town planning.
(D) They register rural-urban migrants at state

highlighting the need for targeted educational interventions. Data from the 2011 census indicates that the gap between these two groups is approximately twenty percentage points. Reducing this difference remains a key objective for the government to ensure equitable social development and enhance the overall human capital.

10. (C) Indore
Urbanization and industrial growth often serve as primary drivers for rapid population increases in specific districts. During the decade between 2001 and 2011, Indore registered the highest population growth rate in Madhya Pradesh. This trend is largely attributed to its status as a major commercial hub, which attracts a steady influx of migrants from rural areas and other states.

11. (D) III and IV only
Demographic analysis of scheduled tribes in Madhya Pradesh reveals specific regional patterns and characteristics. Contrary to some assumptions, the sex ratio among tribal populations is generally healthier and higher than the state's overall average. Additionally, every district in the state, including urban centers like Indore, has a measurable tribal presence, making claims about the complete absence of this population incorrect.

12. (C) 1961-1971
Historical census data reveals various phases of demographic growth within Madhya Pradesh over the past several decades. The period between 1961 and 1971 recorded the highest ever decadal growth rate for the state. This era was characterized by a sharp decline in mortality due to improved health interventions, while birth rates remained high, leading to a significant natural increase in population.

13. (A) Jhabua
Several districts in the southern and eastern parts of Madhya Pradesh are notable for having a sex ratio that exceeds one thousand females per thousand males. Districts like Balaghat, Alirajpur, and Mandla fall into this high sex ratio category. In contrast, Jhabua, while having a significant tribal population, does not exceed this specific threshold, making it distinct among these options.

14. (C) Eastern tribal belt
Health outcomes often correlate with geographical accessibility and the availability of medical infrastructure. In Madhya Pradesh, the eastern tribal belt frequently reports higher infant mortality rates compared to other regions. This is primarily due to the rugged terrain, sparse population distribution, and the resulting challenges in delivering timely maternal and child healthcare services to remote and economically disadvantaged tribal communities.

15. (D) 15.6 percent
The social composition of Madhya Pradesh includes several marginalized communities whose demographic share is carefully monitored for policy formulation. According to the 2011 census, Scheduled Castes account for approximately fifteen point six percent of the state's total population. This significant proportion underscores the importance of inclusive development strategies and affirmative action programs designed to improve the socio-economic status of these communities.

16. (A) Sixth
The relative size of a state's population determines its ranking among the various administrative units of the country. Based on the data collected during the 2011 census, and prior to the reorganization that led to the creation of Telangana, Madhya Pradesh held the sixth position. This ranking reflects its status as one of the most populous and geographically large states in India.

17. (A) Bhopal
Educational attainment varies significantly across the districts of Madhya Pradesh, often influenced by urbanization and the presence of administrative institutions. Bhopal, the state capital, recorded the highest female literacy rate in the 2011 census. This achievement is attributed to better access to schools, higher awareness regarding girls' education, and the concentration of various government and educational facilities in the urban area.

18. (A) The difference between birth rate and death rate
Population change is driven by natural factors and migration patterns. The natural growth rate

Click Here to Buy book on Amazon

ANSWERS

1. (D) 20.35 percent
The decadal population growth rate measures the percentage change in the total number of inhabitants over a ten-year period. In Madhya Pradesh, the 2011 census reported this figure as twenty point three five percent. This rate indicates a significant but slowing pace of demographic expansion compared to the previous decade, reflecting changing socioeconomic conditions across the state.

2. (C) Bhind
Sex ratio is a vital demographic indicator representing the number of females per thousand males within a population. In the northern regions of Madhya Pradesh, certain districts exhibit significantly lower figures compared to the state average. Bhind currently holds the lowest recorded overall sex ratio in the state, often attributed to deep-seated socio-cultural preferences and historical demographic patterns.

3. (C) 5.99 percent
India is characterized by a vast and diverse population distributed across various states and union territories. According to the data finalized in the 2011 census, Madhya Pradesh accounts for approximately five point nine nine percent of the nation's total inhabitants. This proportion establishes the state as a significant demographic component within the administrative and political framework of the country.

4. (A) Both A and R are true and R is the correct explanation of A.
Balaghat district stands out in the state for its exceptionally high sex ratio, exceeding the parity mark. This phenomenon is largely explained by the socio-cultural fabric of the local tribal communities, which historically demonstrate less gender discrimination. Furthermore, the migration of males to neighboring regions for seasonal employment contributes to a higher relative proportion of females in the district.

5. (B) 1,000
The Infant Mortality Rate is a critical measure of the overall health status and quality of pediatric care within a specific region. It is calculated as the total number of deaths of children under one year of age for every one thousand live births occurring in the same period. This standardized metric allows for effective comparisons of healthcare performance across different states.

6. (B) Ujjain
Scheduled Castes form a significant portion of the social structure in various districts of Madhya Pradesh. When analyzing the concentration of this population relative to the total inhabitants of a specific district, Ujjain emerges with the highest percentage. This demographic distribution is influenced by historical settlement patterns and the socio-economic evolution of the Malwa region over several centuries.

NODIA

(B) 7,26,26,809
The 2011 Census provides the most comprehensive data regarding the size and composition of the population in Madhya Pradesh. The official count finalized during this exercise was seven crore, twenty-six lakh, twenty-six thousand, eight hundred and nine. Understanding this absolute figure is fundamental for planning resource allocation, infrastructure development, and various welfare schemes by the state and central governments.

8. (C) Third stage (Falling birth rate, low death rate)
The demographic transition model describes the shift from high birth and death rates to lower levels as a society develops. Madhya Pradesh is currently navigating the third stage of this process, characterized by a noticeable decline in the birth rate alongside a low death rate. This transition reflects improvements in healthcare, increased literacy, and better access to family planning services.

9. (C) 20 percent
Literacy rates in the state show a significant disparity between male and female residents,

(D) Residential areas allocated for low-income government employees

107. Which district in the Gwalior-Chambal division has witnessed an improvement in its sex ratio over recent years, though historically known for a very low sex ratio?
(A) Morena
(B) Alirajpur
(C) Balaghat
(D) Mandla

108. In which year did the Government of Madhya Pradesh announce its dedicated State Population Policy to stabilize population growth?
(A) 1995
(B) 2000
(C) 2005
(D) 2011

109. Consider the following statements regarding the Smart Cities Mission in Madhya Pradesh:
I. Seven cities from the state were selected under this mission.
II. Gwalior and Jabalpur are among the selected cities.
III. The mission is funded entirely and exclusively by the State Government.
IV. The mission incorporates digital technology and e-governance for urban management.
V. Khajuraho is being developed as a Smart City under this specific mission.
Which of the above statement(s) is/are incorrect?
(A) I and II only
(B) IV and V only
(C) II, III and V
(D) III and V only

110. "Area Based Development" and "Pan-city Solutions" are the core strategic components of which urban development mission active in Madhya Pradesh?
(A) HRIDAY
(B) PM Awas Yojana
(C) Smart Cities Mission
(D) Swachh Bharat Mission (Urban)

111. The decline in the child sex ratio in Madhya Pradesh (from 932 in 2001 to 918 in 2011) primarily indicates which of the following social issues?
(A) High natural death rate of female infants compared to males
(B) Increase in female literacy
(C) Large scale migration of female children to other states
(D) Son preference and female foeticide issues

112. Which of the following is a major challenge regarding urban transport infrastructure in the rapidly growing cities of Madhya Pradesh?
(A) Excessive reliance on non-motorized transport
(B) Over-provision of public parking spaces
(C) Complete absence of inter-city bus connectivity
(D) Traffic congestion and mass transit gaps

113. Which health intervention programme in Madhya Pradesh heavily contributed to reducing the Infant Mortality Rate by incentivizing institutional deliveries?
(A) Deendayal Antyodaya Yojana
(B) Mukhyamantri Medhavi Vidyarthi Yojana
(C) Janani Suraksha Yojana (JSY)
(D) Sambal Yojana

114. What is the main cause of the relatively low population density in the districts of Dindori and Mandla?
(A) Lack of any rivers or water sources
(B) Hilly terrain and dense forest cover
(C) High industrial pollution
(D) Extreme cold climate

115. The concept of a "Satellite Town" is applied in urban planning to:
(A) Host space and satellite launching stations
(B) Create completely rural eco-villages
(C) Isolate slum populations from the main city
(D) Relieve pressure from a major parent city

116. Rural-to-urban migration in Madhya Pradesh leads to which demographic change in the source (rural) areas?
(A) Increase in the proportion of the local youth population
(B) Skewing of the age-sex pyramid in rural communities
(C) Sudden increase in the overall regional literacy rate
(D) Increase in the overall population density of

Downloaded from www.pdf.tube

specifically refers to the increase in population resulting from biological factors alone. It is calculated by determining the difference between the crude birth rate and the crude death rate over a specified period. This metric provides a clear picture of the inherent growth capacity of a region's population.

19. (D) Morena
The child sex ratio, measuring the number of females per thousand males in the zero to six years age group, is a sensitive indicator of social preferences. Morena recorded the lowest child sex ratio in Madhya Pradesh during the 2011 census. This trend is a matter of serious concern, reflecting deep-seated issues such as son preference and the misuse of medical technology.

20. (A) P-3, Q-2, R-1, S-4
Demographic indicators provide a numerical overview of a state's population characteristics as of the 2011 census. The overall sex ratio was recorded at nine hundred thirty-one, while the child sex ratio stood at nine hundred eighteen. Population density was two hundred thirty-six persons per square kilometer, and the total literacy rate reached approximately sixty-nine point three two percent for the state.

21. (C) Indore
The distribution of Scheduled Caste populations in Madhya Pradesh is uneven, with higher concentrations in certain districts. While some districts have a high percentage relative to their total population, Indore holds the record for the highest absolute number of Scheduled Caste individuals. This is primarily due to the large total population of the district and its status as a major industrial center.

22. (B) Anuppur
Population growth rates vary across Madhya Pradesh due to differences in migration, birth rates, and industrial development. During the 2001 to 2011 decade, certain districts recorded growth rates much lower than the state average. Anuppur emerged as the district with the lowest decadal growth rate. Such trends often indicate out-migration or a faster transition toward lower fertility levels in specific regional contexts.

23. (D) Steady decline due to improved healthcare facilities
The Crude Death Rate serves as a basic indicator of mortality within a population over a given year. In Madhya Pradesh, this rate has shown a steady decline over the last two decades. This positive trend is largely the result of expanded healthcare infrastructure, better immunization coverage, improved nutrition programs, and more effective interventions in maternal and child health across the state.

24. (D) Jabalpur
Literacy is a fundamental indicator of human development and is closely linked to economic opportunities and social awareness. Among all the districts in Madhya Pradesh, Jabalpur recorded the highest overall literacy rate in the 2011 census. This distinction is supported by the district's strong historical emphasis on education, its role as a major administrative hub, and its well-established network of educational institutions.

25. (B) 931
The sex ratio is a critical demographic statistic that reflects the gender balance within a society. According to the final results of the 2011 census for Madhya Pradesh, the state's overall sex ratio was nine hundred thirty-one females per one thousand males. This figure represents an improvement from the previous census, indicating positive changes in social health and female survival rates.

26. (D) The state holds 8 percent of India's population and 8 percent of its land area.
Madhya Pradesh is a large state with a demographic and geographic profile that significant impacts national statistics. While it does contain approximately six percent of India's total population, it covers roughly nine point four percent of the country's total land area. Asserting that both the population and land area shares are exactly eight percent is factually incorrect and ignores official census data.

27. (A) Alirajpur
Educational disparities remain a challenge in several tribal-dominated districts of Madhya Pradesh. Alirajpur currently holds the record for the lowest overall literacy rate in the state

NODIA

borders.

128. Which of the following is the most appropriate reason for the high percentage of the working population being engaged as agricultural laborers rather than cultivators in some districts?
(A) High availability of large mechanized farms
(B) Preference for wage labor over owning land
(C) Ban on agricultural land ownership by the government
(D) Widespread landlessness among the rural poor

129. The urban population of Madhya Pradesh grew from 26.67% in 2001 to what percentage in 2011?
(A) 27.63%
(B) 31.16%
(C) 28.50%
(D) 35.20%

130. Among the following, which is the most sustainable approach to achieving long-term population stabilization in Madhya Pradesh?
(A) Women empowerment and access to healthcare
(B) Strict penal laws for having more than two children
(C) Mass sterilization camps without informed consent
(D) Encouraging out-migration to other Indian states

Click Here to Buy book on Amazon

economic challenges. Recurrent droughts and a lack of diversified employment opportunities in the agricultural sector act as strong push factors for the local population. Many residents from these districts migrate to larger cities in search of seasonal or permanent work to sustain their livelihoods and support their families.

37. (A) 21.1 percent
Madhya Pradesh is known for its large and diverse indigenous population, which forms a vital part of its social fabric. According to the data from the 2011 census, Scheduled Tribes constitute approximately twenty-one point one percent of the total population. This significant percentage makes the state home to the largest absolute number of tribal people in the entire country.

38. (D) Cultivation and Agricultural Labour
The workforce structure of Madhya Pradesh remains predominantly agrarian despite ongoing urbanization and industrial development. A vast majority of the state's working population is engaged in the primary sector, specifically in cultivation and as agricultural laborers. This high dependence on farming reflects the rural nature of the state's economy and the critical role of agriculture in providing livelihoods.

39. (D) Dindori
Low population density is often found in districts with difficult terrain, limited infrastructure, or extensive forest cover. Dindori recorded the lowest population density in Madhya Pradesh according to the 2011 census. This sparsely populated district is located in the eastern part of the state and is characterized by its hilly geography and significant forest land, which limits large-scale human settlement.

40. (D) Islam
The religious composition of Madhya Pradesh is diverse, with various communities contributing to its cultural heritage. While Hinduism is the religion followed by the vast majority of the population, Islam is the second largest religious group in terms of absolute numbers. Muslim communities are distributed across the state, with significant concentrations in urban centers such as Bhopal, Indore, and Jabalpur.

41. (B) 2, 3, 1, 4
Population density in major urban districts of Madhya Pradesh follows a specific hierarchy based on land area and total inhabitants. Bhopal has the highest density due to its relatively small geographical size and high urbanization. This is followed by Indore, which is the most populous district, then Jabalpur, and finally Gwalior. This order reflects the concentration of residents in these cities.

42. (C) P-4, Q-3, R-2, S-1
Tribal groups in Madhya Pradesh are concentrated in specific geographical pockets across the state. The Bhil tribe is predominantly found in the western districts of Jhabua and Alirajpur. Sahariyas are mostly located in the northern regions like Gwalior and Shivpuri. The Baiga tribe is concentrated in Mandla and Dindori, while the Bharia tribe is famously settled in Patalkot, Chhindwara.

43. (B) 236
Population density is a standard measure of the intensity of human settlement in a given area. For Madhya Pradesh, the 2011 census reported a density of two hundred thirty-six persons per square kilometer. This figure is derived by dividing the total population of the state by its total land area, providing an average that hides significant variations between urban and rural districts.

44. (D) The ratio of children and elderly to the working-age population
The dependency ratio is a key indicator of the economic burden on the productive portion of the population. It is calculated by comparing the number of individuals who are typically not in the labor force, such as children under fifteen and the elderly over sixty, to the total working-age population. A high ratio indicates a greater pressure on workers to support others.

45. (C) Abundant coastline and port facilities
The high population density of the Malwa region is driven by its fertile black soil, moderate climate, and well-developed industrial clusters. However, since Madhya Pradesh is a landlocked state located in the heart of India, it does not possess any coastline or sea ports. Therefore, maritime trade and port facilities are not

Downloaded from www.pdf.tube

according to 2011 census data. This low figure is tied to various factors, including the district's high tribal population, remote geographic location, and historical lack of access to formal schooling and vocational training facilities.

28. (A) II and III only
Between 2001 and 2011, Madhya Pradesh's overall decadal growth rate of twenty point three percent was higher than the national average. During this period, urban growth outpaced rural growth across the state due to migration and industrial expansion. Notably, Indore district experienced rapid expansion, recording a growth rate that exceeded thirty percent, reflecting its role as a major economic magnet.

29. (C) 69.32 percent
The literacy rate is an important metric for assessing the socio-economic progress of a population. As per the official 2011 census findings, the overall literacy rate for Madhya Pradesh was sixty-nine point three two percent. This figure illustrates the state's progress in expanding educational access over the years, though it still highlights the need for continued efforts to achieve universal literacy.

30. (D) The average number of children born to a woman during her lifetime
Total Fertility Rate is a refined measure used by demographers to understand reproductive patterns and project future population growth. It represents the average number of children that would be born to a woman if she were to experience current age-specific fertility rates throughout her childbearing years. Monitoring this rate is essential for evaluating the effectiveness of family welfare and health policies.

31. (C) Southern districts like Betul and Khandwa
The Korku tribe is one of the distinct indigenous communities found in the central and southern parts of the state. They are primarily concentrated in the Satpura mountain ranges and the adjacent districts of Betul, Khandwa, Burhanpur, and Hoshangabad. Their culture and traditional livelihood practices are deeply connected to the forest and agricultural landscape of this specific geographic region.

NODIA

32. (C) It is significantly lower than the national average.
Population density measures the average number of persons living per square kilometer of land area. In 2011, Madhya Pradesh had a density of two hundred thirty-six, which is considerably lower than the national average of three hundred eighty-two. This difference is largely due to the state's vast geographical area, extensive forest cover, and large tracts of relatively sparse hilly terrain.

33. (B) Alirajpur - Highest proportion of ST population
Demographic data highlights specific districts with high concentrations of tribal populations in Madhya Pradesh. Alirajpur is recognized for having the highest proportion of Scheduled Tribe residents relative to its total population. In contrast, districts in the northern plains like Bhind have very low tribal proportions, and Ujjain is noted for its high Scheduled Caste percentage rather than low tribal figures.

34. (D) P-3, Q-4, R-1, S-2
Population density in Madhya Pradesh varies significantly between highly urbanized and predominantly rural or forested districts. Indore has a very high density of eight hundred forty-one people per square kilometer, while Jabalpur stands at four hundred seventy-three. Conversely, sparsely populated districts like Sheopur and Panna have much lower densities of one hundred seventy-one and one hundred forty-two, respectively.

35. (A) Jains
Among the various religious minority communities in Madhya Pradesh, the Jain community consistently records the highest literacy rates. This demographic characteristic is often linked to the community's traditional focus on trade, commerce, and higher education. Their high educational attainment contributes significantly to the urban professional workforce and reflects a long-standing cultural emphasis on learning and intellectual development across the state.

36. (A) Recurrent droughts and lack of employment
Migration patterns in the Bundelkhand region are heavily influenced by environmental and

55. (A) Full-time students and household dependents
The non-working population includes individuals who are not engaged in any economically productive activity. In Madhya Pradesh, the largest portion of this group consists of full-time students, young children, and household dependents who perform domestic duties. While retired individuals and the unemployed are also part of this category, students and dependents form the most significant share due to the state's youthful age structure.

56. (A) Bhil
Madhya Pradesh is home to many indigenous groups, with the Bhil and Gond tribes being the most prominent. As per the 2011 census, the Bhil tribe is the largest tribal group in the state by population size. They are primarily concentrated in the western districts, such as Dhar and Jhabua, and have a rich cultural history that significantly shapes the state's identity.

57. (A) Baghelkhand Plateau
Population distribution is influenced by topography, soil fertility, and water availability. The Baghelkhand Plateau in the eastern part of Madhya Pradesh generally exhibits a sparse population. This region's rugged terrain, extensive forest cover, and relatively limited industrial development compared to the Malwa Plateau or Narmada Valley lead to fewer human settlements and lower overall population density across its various districts.

58. (A) Bhil, Gond, Kol, Korku
The major tribal communities of Madhya Pradesh follow a specific order in terms of their total population. The Bhils are the most numerous, followed by the Gonds, who are widespread across the central and eastern regions. The Kol and Korku tribes represent the next largest groups. This sequence highlights the relative demographic strength of these communities within the state's significant tribal population.

59. (C) Bhopal
Although Indore has the largest total number of residents, Bhopal district has the highest population density in Madhya Pradesh. This is because Bhopal's large urban population is concentrated within a significantly smaller geographical area. High density in the capital reflects intensive land use and rapid urban expansion, making it a critical focus for urban planning and municipal service management in the state.

60. (B) Demographic dividend
A declining dependency ratio occurs when the proportion of the working-age population increases relative to children and the elderly. This shift creates a demographic dividend, which is an opportunity for accelerated economic growth if the state invests in education, health, and job creation. Capitalizing on this trend is vital for the long-term prosperity and industrial development of Madhya Pradesh.

61. (C) Statutory Towns
In the Indian census, urban areas are classified into two main categories based on their administrative status. Areas that are governed by a formal local body, such as a Municipality, Municipal Corporation, or Cantonment Board, are officially designated as Statutory Towns. This classification is independent of population size or density and is purely based on the notification issued by the state government.

62. (A) Education, defense, and legal administration
Jabalpur is a major urban center in Madhya Pradesh with distinct functional characteristics. It is historically recognized as an important hub for education and legal administration, being the seat of the State High Court. Furthermore, it has a significant defense presence with various ordnance factories and military establishments, which have traditionally been the primary drivers of its urban economy and growth.

63. (A) Out-migration of highly skilled professionals
Brain drain is a specific type of migration that involves the movement of highly educated and skilled individuals from their home region to other areas offering better opportunities. In urban Madhya Pradesh, this typically refers to engineers, doctors, and IT professionals moving to major metropolitan cities or abroad. This trend represents a loss of human capital that could otherwise contribute to the state's development.

Click Here to Buy book on Amazon

can sustainably support without depleting its natural resources. For rapidly growing districts like Indore, understanding this limit is crucial for planning water resources, waste management, and energy needs to prevent environmental degradation and ensure the long-term well-being of the urban population.

118. (D) Indore, Bhopal, Jabalpur, Gwalior
The hierarchy of major cities in Madhya Pradesh by population is a key aspect of its urban geography according to 2011 census data. Indore is the largest city, followed by the state capital, Bhopal. Jabalpur and Gwalior occupy the third and fourth positions, respectively. This ranking reflects the relative economic and administrative importance of these urban centers as demographic hubs.

119. (B) One-fifth
The tribal population is a substantial and integral part of the demographic makeup of Madhya Pradesh. According to the 2011 census, Scheduled Tribes constitute approximately twenty-one point one percent of the state's total inhabitants. This proportion, which is roughly one-fifth of the total population, underscores the state's status as a major center for indigenous communities and the importance of tribal-focused development.

120. (A) The state policy completely bans family planning sterilizations.
The demographic goals of Madhya Pradesh focus on voluntary family planning and health improvements. The state aims to achieve the replacement level of fertility and prioritize maternal and child health through immunization and better medical care. However, the state policy does not ban sterilizations; rather, it promotes various family planning methods as part of a voluntary and welfare-oriented approach to population control.

121. (A) Infant Mortality Rate
While Madhya Pradesh has made significant progress in many areas, some of its demographic indicators remain more challenging than the national average. The Infant Mortality Rate in the state has historically been higher than the figure for India as a whole. This situation highlights the need for continued and intensified efforts in neonatal and pediatric healthcare to improve child survival across the state.

122. (D) Jabalpur Division
Regional analysis of educational attainment reveals that some parts of the state perform better than others. The Jabalpur Division, which includes Jabalpur district with its high urban literacy, generally exhibits the highest overall literacy rate among the various administrative divisions of Madhya Pradesh. This is due to its strong educational infrastructure and the historical emphasis on learning in its major urban and administrative centers.

123. (C) Redeveloping slums at their original location
"In-situ Slum Redevelopment" is a modern approach to improving urban housing for the poor. It involves redeveloping slum areas at their original location rather than relocating the residents to the outskirts of the city. This strategy minimizes social and economic disruption for the dwellers while providing them with better-built homes and basic amenities, helping to integrate these areas into the formal urban fabric.

124. (B) Pradhan Mantri Matru Vandana Yojana
The Pradhan Mantri Matru Vandana Yojana is a maternity benefit program that provides cash incentives to pregnant and lactating mothers for the birth of their first child. In Madhya Pradesh, this scheme helps ensure that women can afford better nutrition and take adequate rest during pregnancy. This support is vital for improving both maternal health and birth outcomes, ultimately impacting the state's demographic indicators.

125. (C) Northern (Gwalior-Chambal) region
The Beti Bachao Beti Padhao campaign is a national initiative focused on addressing the declining child sex ratio and promoting female education. This program is particularly critical for the northern districts of Madhya Pradesh, such as Bhind and Morena, which have historically recorded some of the lowest sex ratios. Targeted social interventions in this region aim to combat gender discrimination and empower girls.

126. (A) Literate
For the purposes of the Indian census, the definition of literacy is based on basic functional

NODIA

73. (D) Indore
Different cities in Madhya Pradesh serve various functional roles within the state's economy. While Bhopal is the administrative capital, Indore is widely recognized as the commercial and industrial capital. Its strategic location, strong trading traditions, and established industrial base, particularly in textiles and manufacturing, have made it the most significant economic center and the largest urban market in the state.

74. (B) 1,00,000
The Census of India categorizes urban centers into different classes based on their population size to facilitate better urban analysis. A "Class I city" is specifically defined as a town or urban area that has a minimum population of one lakh residents. These cities are often the primary focus of urban development policies and receive prioritized funding for infrastructure and municipal services.

75. (B) 7
The Smart Cities Mission aims to transform urban areas through the application of smart solutions and infrastructure improvements. In Madhya Pradesh, a total of seven cities were selected to participate in this national initiative. These cities include the major metropolitan centers and regional hubs, namely Indore, Bhopal, Jabalpur, Gwalior, Sagar, Satna, and Ujjain, all working toward modernized urban management.

76. (D) Bhil and Bhilala
Seasonal migration is a common livelihood strategy for tribal communities in the western districts of Madhya Pradesh, such as Jhabua and Alirajpur. The Bhil and Bhilala tribes frequently migrate to neighboring states like Gujarat and Rajasthan to work as wage laborers in agriculture and construction. This movement usually occurs after the local harvest when employment opportunities in their home districts become scarce.

77. (B) An urban spread comprising a town and its adjoining urban outgrowths
An Urban Agglomeration is a census term used to describe a continuous urban spread. It consists of a central statutory town and its physically contiguous urban outgrowths, or two or more physically contiguous towns with or without outgrowths. This concept helps in understanding the real extent of urbanization beyond formal municipal boundaries, providing a more accurate picture of a city's demographic influence.

78. (C) Between 350 and 500
The total number of urban units in Madhya Pradesh includes both statutory towns and census towns as identified during the decadal survey. In the 2011 census, the number of these urban areas was recorded to be between three hundred fifty and five hundred. This collection of towns forms the network of urban settlements across the state, ranging from small census towns to large cities.

79. (B) Malanpur
Gwalior's modern economic profile has been significantly enhanced by the development of nearby industrial areas. Malanpur, located in the adjoining Bhind district, serves as a major industrial hub for the Gwalior region. It hosts numerous large-scale manufacturing units and industries that contribute to the urbanization and economic growth of the area, complementing Gwalior's traditional role as a center of heritage and administration.

80. (D) P-3, Q-2, R-1, S-4
Demographic features vary significantly among the districts of Madhya Pradesh. Indore has the highest absolute urban population, while Bhopal has the highest percentage of urbanization. Dindori is noted for having the lowest percentage of urban residents. Furthermore, Jhabua has the lowest percentage of Scheduled Caste population, reflecting the dominance of tribal communities in the western part of the state.

81. (C) Indore
Cleanliness and waste management have become key performance indicators for Indian cities under the Swachh Bharat Mission. Indore has consistently secured the first rank in the national Swachh Survekshan survey for several years. This success is due to its highly efficient solid waste management system, public awareness campaigns, and the active participation of its citizens in maintaining urban cleanliness and hygiene.

Downloaded from www.pdf.tube

and social structure remain closely integrated with the local forest ecology.

100. (C) To review, monitor, and guide the implementation of the State Population Policy
The State Population Commission was established in Madhya Pradesh to serve as an advisory and monitoring body for demographic issues. Its primary role is to oversee the implementation of the State Population Policy, ensuring that targets related to fertility, maternal health, and population stabilization are met. It provides guidance on coordinating efforts across various government departments to achieve the state's long-term demographic goals.

101. (A) 2, 3, 1, 4
Rural-to-urban migration typically follows a logical sequence of events. It begins with the lack of employment opportunities in rural agriculture, which acts as a push factor. This lead to the actual migration of people to cities. The rapid influx often results in the growth of slums and overcrowding, which eventually puts immense strain on existing urban infrastructure, such as water supply and sanitation.

102. (A) Bhopal and Indore
To modernize urban transportation and reduce traffic congestion, Madhya Pradesh has initiated Metro Rail projects in its two largest cities, Bhopal and Indore. These mass transit systems are designed to provide efficient, high-speed, and sustainable travel options for the growing urban population. The development of these projects is a significant step toward improving the urban infrastructure and global competitiveness of these metropolitan areas.

103. (B) Mandideep
Mandideep is a prominent industrial township located near the state capital, Bhopal. It serves as an effective industrial satellite town, hosting many large and medium-scale industries, including electronics and pharmaceuticals. This proximity allows for economic synergy between the administrative functions of Bhopal and the manufacturing strength of Mandideep, contributing to the regional growth and providing significant employment opportunities for the local urban workforce.

104. (D) Increasing female literacy and marriage age
Population policies emphasize long-term strategies that address the root causes of high fertility. Increasing female literacy and raising the age at marriage are highly effective approaches for population stabilization. Educated women are more likely to make informed choices about family size and have better access to healthcare. These social improvements naturally lead to a decline in birth rates and improved maternal and child health.

NODIA

105. (C) Poverty, unemployment, and lack of facilities
Push factors are the negative conditions in rural areas that drive residents to move elsewhere. In Madhya Pradesh, widespread poverty, lack of stable employment in the agricultural sector, and the absence of adequate health and educational facilities serve as major push factors. These challenges compel people to migrate to urban centers in hope of finding better livelihoods and escaping the hardships of rural life.

106. (B) A compact area of poorly built tenements in unhygienic conditions
The Census of India defines a slum as a compact settlement of at least three hundred people living in poorly built, congested tenements in unhygienic environments. These areas typically lack basic infrastructure such as proper drainage, safe drinking water, and sanitation. Identifying and mapping these areas is essential for urban development programs aimed at improving the living conditions of the urban poor in the state.

107. (A) Morena
Morena district, located in the northern part of Madhya Pradesh, has historically been known for having one of the lowest sex ratios in the state. However, in recent years, there has been a noticeable improvement in this indicator due to increased social awareness and government interventions. While it still faces challenges, this positive trend reflects a gradual change in demographic patterns within the Gwalior-Chambal region.

108. (B) 2000
In the year 2000, the Government of Madhya Pradesh announced its comprehensive State Population Policy. This policy was designed to address the challenges of rapid population

91. (B) Better employment and higher urban wages
Migration is influenced by factors that attract people to cities, known as pull factors. In Madhya Pradesh, the prospect of better employment opportunities and higher wages in urban centers like Indore and Bhopal acts as the strongest pull factor. While rural distress can push people away, the promise of economic improvement and a higher standard of living in the city remains the primary motivator.

92. (C) Equal distribution of wealth among all urban dwellers
Rapid urbanization in Madhya Pradesh brings various environmental and social challenges. These include the loss of agricultural land to urban sprawl, the creation of urban heat islands, and increased pressure on municipal services like water supply. However, urbanization typically does not lead to an equal distribution of wealth; instead, it often results in increased economic inequality and the growth of informal settlements.

93. (C) Unplanned migration and housing lacks
The presence of large slum populations in major cities of Madhya Pradesh is a direct result of rapid, unplanned rural-to-urban migration. Many migrants moving to centers like Indore and Bhopal in search of work cannot afford formal housing. This gap between the demand for low-cost accommodation and the available supply leads to the creation of informal, densely populated settlements with limited access to basic amenities.

94. (C) P-2, Q-4, R-1, S-3
Urban development schemes are designed to address specific municipal needs. AMRUT focuses on basic civic amenities like water supply and sewerage, while the Swachh Bharat Mission targets waste management and sanitation. Pradhan Mantri Awas Yojana aims to provide affordable housing for all citizens. Finally, the Smart Cities Mission integrates information technology to create modern infrastructure and improve the overall quality of urban life.

95. (B) Child Sex Ratio and social attitudes
The Laadli Laxmi Yojana is a flagship scheme of the Madhya Pradesh government aimed at improving the status of girls in society. By providing financial incentives to families upon the birth and education of a daughter, it seeks to improve the child sex ratio and change negative social attitudes towards female children. This program is a key part of the state's demographic and social policy.

96. (B) Better education and employment opportunities
Pull factors are the attractive features of urban areas that encourage people to migrate from rural regions. In cities like Indore and Bhopal, these include superior educational institutions, a wide range of employment opportunities in the industrial and service sectors, and better overall facilities. These prospects attract young and skilled individuals seeking personal and professional advancement, contributing to the continued growth of these major cities.

97. (D) Basic urban infrastructure and services
The AMRUT scheme, or Atal Mission for Rejuvenation and Urban Transformation, is a central initiative focusing on urban renewal. In Madhya Pradesh, it primarily aims to ensure that every household in selected cities has access to a tap with an assured supply of water and a sewerage connection. It also emphasizes developing green spaces and parks to improve the livability and environmental health of urban areas.

98. (A) Bhopal
Bhopal is famously known as the "City of Lakes" due to its numerous natural and artificial water bodies, including the Upper and Lower Lakes. These lakes are central to the city's identity and climate. However, rapid urbanization poses significant challenges, such as pollution and encroachment on lake boundaries, making lake conservation a priority for the city's environmental management and urban development planning.

99. (B) Vindhyan and Satpura mountain ranges
The Gond tribe is one of the largest and most widespread indigenous communities in India. In Madhya Pradesh, they are predominantly found in the hilly and forested regions of the Vindhyan and Satpura mountain ranges. Their settlements span several districts in the central and southern parts of the state, where their traditional culture

Click Here to Buy book on Amazon

64. (A) Both A and R are true and R is the correct explanation of A.
Bhopal district records the highest population density in the state, which is accurately explained by its unique urban geography. The district covers a relatively small land area but contains a large, densely packed urban core serving as the administrative capital. The concentration of government offices, commercial centers, and residential developments within these limited boundaries naturally leads to a high number of persons per square kilometer.

65. (A) Dindori
The level of urbanization varies significantly across the districts of Madhya Pradesh, reflecting differences in economic development and infrastructure. Dindori district has the lowest percentage of urban population in the state, with the vast majority of its residents living in rural villages. This low urbanization is linked to its difficult terrain and the primary reliance on traditional agriculture and forest-based livelihoods.

66. (A) Rewa
The Smart Cities Mission is a centrally sponsored initiative aimed at developing sustainable and citizen-friendly urban areas. In Madhya Pradesh, several cities were selected for this program, including Sagar, Satna, Ujjain, Gwalior, Jabalpur, Indore, and Bhopal. While Rewa is an important regional center in the eastern part of the state, it was not included in the original list of cities for this mission.

67. (C) Marriage
Migration patterns are often influenced by gender-specific social customs. In Madhya Pradesh, as in much of India, marriage is the most significant driver of rural-to-rural female migration. Following traditional practices, women typically move from their parental home to their husband's village after marriage. This social requirement accounts for the vast majority of female movement within the rural sectors of the state.

68. (B) Ujjain
A million-plus city is defined as an urban area or agglomeration with a population exceeding one million people. According to the 2011 census, Indore, Bhopal, and Jabalpur all passed this threshold. While Ujjain is a major historical and religious city, its population at the time of the census remained below the one-million mark, thus not qualifying it as a million-plus city.

69. (A) Simhastha Kumbh Mela
Large-scale religious events often catalyze urban infrastructure development in pilgrimage centers. Ujjain hosts the Simhastha Kumbh Mela every twelve years, an event that brings millions of visitors to the city. To accommodate this massive influx, the government invests heavily in improving roads, sanitation, water supply, and public transport, which has a long-lasting impact on the city's overall urban landscape and capacity.

70. (C) Indore
Urbanization can be measured in both absolute numbers and as a percentage of the total population. While some districts may have a higher percentage of urban residents, Indore holds the record for the highest absolute number of people living in urban areas in Madhya Pradesh. This is due to the sheer size of its population and its growth as the state's primary economic hub.

71. (A) I, III and IV
Indore is the most populous city in Madhya Pradesh and a key participant in the Smart Cities Mission. It is surrounded by major industrial clusters like Pithampur, which drive its economic growth. However, despite its high literacy, Jabalpur actually holds the record for the highest overall literacy rate in the state. Therefore, statements about population, smart city status, and industrial links are correct.

72. (B) A steady and continuous increase
Like much of the country, Madhya Pradesh has experienced a consistent trend of rising urbanization over the past several decades. The percentage of people living in urban areas has shown a steady increase in every census since the state's formation. This growth is driven by rural-to-urban migration, the natural increase of urban populations, and the reclassification of rural areas into new towns.

NODIA

growth and to achieve demographic stability. It set specific targets for reducing fertility and mortality rates while emphasizing the importance of maternal health, child survival, and the role of local government bodies in implementing family welfare programs.

109. (D) III and V only
The Smart Cities Mission in Madhya Pradesh is a joint initiative funded by both the central and state governments, not by the state alone. Seven cities, including Gwalior and Jabalpur, were selected for their use of technology to improve urban services. Notably, Khajuraho is not part of this specific mission, although it is an important cultural and tourist site for the state.

110. (C) Smart Cities Mission
The Smart Cities Mission employs a dual strategy for urban development. "Area Based Development" focuses on transforming specific parts of a city through redevelopment or improvement, while "Pan-city Solutions" use digital technology and data to improve services across the entire urban area. This approach is being implemented in several cities across Madhya Pradesh to create more efficient and citizen-centric urban environments.

111. (D) Son preference and female foeticide issues
A declining child sex ratio is a critical social indicator that often points to deep-seated gender biases within a society. In Madhya Pradesh, this decline primarily reflects the issues of son preference and the illegal practice of female foeticide. Addressing these challenges requires a combination of strict legal enforcement and extensive social campaigns to promote gender equality and value the girl child.

112. (D) Traffic congestion and mass transit gaps
Rapid urban growth in Madhya Pradesh has outpaced the development of transportation infrastructure in many cities. Major urban centers face severe traffic congestion and significant gaps in mass transit options. Addressing these issues requires investment in public transport systems, such as the new Metro Rail projects, and better urban planning to ensure efficient movement and reduce the reliance on private vehicles.

113. (C) Janani Suraksha Yojana (JSY)
The Janani Suraksha Yojana is a safe motherhood intervention that has significantly impacted infant and maternal health in Madhya Pradesh. By providing cash incentives for institutional deliveries, the scheme encourages women from low-income families to give birth in health facilities under professional medical care. This shift from home deliveries has been a major factor in reducing the state's historically high infant mortality rate.

114. (B) Hilly terrain and dense forest cover
Geographic factors play a decisive role in determining where people live. Districts like Dindori and Mandla in eastern Madhya Pradesh have a low population density primarily because of their rugged, hilly terrain and extensive dense forest cover. These physical features make large-scale agriculture and infrastructure development difficult, leading to small, scattered settlements rather than the dense populations found in the state's plains.

NODIA

115. (D) Relieve pressure from a major parent city
Satellite towns are an urban planning strategy used to manage the growth of large metropolitan areas. These towns are developed near a major parent city to provide additional housing and employment options, thereby relieving the pressure on the central city's infrastructure and services. By creating these secondary hubs, planners aim to prevent over-congestion and ensure more balanced regional urban development.

116. (B) Skewing of the age-sex pyramid in rural communities
Migration is often selective, with young adult males being the most likely to move from rural areas to cities for work. In Madhya Pradesh, this trend leads to a skewing of the age-sex pyramid in the source villages. These communities often see a higher proportion of elderly people, women, and children remaining behind, which can significantly affect the local labor supply and social structure.

117. (D) Carrying capacity
Carrying capacity is an environmental and demographic concept that refers to the maximum population size that a specific region

Visit :
www.pdf.tube

Download PDFs For :

- ✓ MPPSC Chapterwise Question Bank
- ✓ KVS/NVS Chapterwise Question Bank
- ✓ KVS/NVS 30 Sample Papers for Tier-II
- ✓ DSSSB TGT Chapterwise Question Bank
- ✓ DSSSB Sample Papers
- ✓ Chapterwise Question Bank
- ✓ JEE NEET Foundation
- ✓ Primary Classes Worksheets
- ✓ Olympiad Guide
- ✓ Sample Papers
- ✓ Previous Year CBSE Papers
- ✓ Previous JEE, NEET and CUET Papers

Nodia Editions LLP

125, Sector 6, Vidhyadhar Nagar, Jaipur 302039

MRP ₹ 480.00

Downloaded from www.pdf.tube

skills rather than formal education. Any person aged seven years or older who can both read and write with understanding in at least one language is classified as a literate individual. This standardized definition allows for a consistent assessment of the educational progress of the population across different regions.

127. (B) They work at the grassroots level to improve maternal and child health, thereby reducing MMR and IMR.
ASHA workers are community-based health activists who play a pivotal role in the health system of Madhya Pradesh. They work at the village level to provide health education, encourage institutional deliveries, and ensure that children are immunized. By bridging the gap between rural communities and health facilities, they contribute significantly to reducing the maternal mortality ratio and the infant mortality rate in the state.

128. (D) Widespread landlessness among the rural poor
The rural workforce in many districts of Madhya Pradesh is characterized by a high proportion of agricultural laborers compared to cultivators. This demographic reality is primarily due to widespread landlessness among the poor, particularly within marginalized communities. Without their own land to farm, these individuals must work on the farms of others for daily wages, highlighting the economic vulnerability and social inequality in rural areas.

129. (A) 27.63%
Urbanization in Madhya Pradesh has shown a gradual but steady upward trend between consecutive census operations. From a level of twenty-six point four six percent in 2001, the urban population grew to approximately twenty-seven point six three percent by 2011. This increase reflects the slow but continuous transition of the state toward a more urbanized society, driven by migration and the growth of existing towns.

130. (A) Women empowerment and access to healthcare
Long-term population stabilization is best achieved through social development and voluntary participation. Empowering women through education and economic opportunities, combined with universal access to reproductive healthcare and family planning services, is the most sustainable approach. This strategy addresses the underlying reasons for high fertility and leads to improved family well-being, naturally resulting in a more balanced and stable demographic growth for Madhya Pradesh.

www.nodia.in

NODIA

82. (B) 27.6 percent
The level of urbanization is an important indicator of a state's structural economic transformation. According to the 2011 census, the urban population of Madhya Pradesh was approximately twenty-seven point six percent of its total population. While this reflects a growing urban presence, it also indicates that a large majority of the state's residents still live in rural areas, maintaining its agrarian character.

83. (D) Bhopal
While Indore is the largest city by total population, Bhopal is the most urbanized district in Madhya Pradesh in terms of percentage. More than eighty percent of Bhopal's residents live in urban areas, which is the highest proportion among all districts in the state. This high urbanization level is driven by its function as the state's administrative center and its compact geographical boundaries.

84. (C) Indore-Pithampur-Ujjain
A "Mega City" corridor refers to a continuous belt of high-density urban and industrial development. In Madhya Pradesh, the region connecting Indore, the industrial hub of Pithampur, and the historical city of Ujjain is the strongest candidate for such a corridor. This area is witnessing rapid growth in infrastructure, manufacturing, and services, leading to the physical and economic integration of these centers.

85. (C) Bhopal
Bhopal serves as the administrative capital of Madhya Pradesh, hosting the state legislature and major government departments. Its economy has seen significant expansion in the tertiary sector, including services, administration, and education. The city's growth is largely driven by its political importance and its role as a regional hub, leading to rapid urban development and a high level of municipal infrastructure.

86. (A) Presence of a Municipal Corporation or Cantonment Board
Census Towns are areas that possess urban characteristics but are not formally notified as statutory towns. The criteria for this classification include a minimum population of five thousand, a population density of four hundred persons per square kilometer, and a non-agricultural male workforce of at least seventy-five percent. The presence of a Municipal Corporation is actually a requirement for Statutory Towns, not Census Towns.

87. (B) Indore UA
The Indore Urban Agglomeration is the largest in Madhya Pradesh based on the 2011 census. It encompasses the city of Indore and its surrounding urban outgrowths, reflecting the extensive physical expansion of the city beyond its municipal limits. This large urban concentration highlights Indore's role as the primary center for commerce, industry, and migration within the state's increasingly urbanized demographic landscape.

88. (B) I only
Seasonal migration among tribal populations is primarily a "push" driven phenomenon caused by distress and lack of local employment rather than prosperity. This movement often has negative social consequences, such as disrupting children's education and health. Programs like MGNREGA are specifically designed to provide local work opportunities and reduce the necessity for such migration by providing a social safety net in rural areas.

89. (B) Religious, cultural, and pilgrimage center
Cities are often classified by their dominant functional role. Ujjain is primarily recognized as a religious and cultural hub, being one of the holiest cities in India. Its economy and urban life revolve around the Mahakaleshwar Temple and the cycle of the Simhastha Kumbh Mela. This religious significance draws millions of pilgrims and tourists, making the hospitality and service sectors central to its growth.

90. (C) 4
In the 2011 census, Madhya Pradesh was found to have four cities or urban agglomerations with a population exceeding one million. These major metropolitan centers are Indore, Bhopal, Jabalpur, and Gwalior. The growth of these "million-plus" cities highlights the concentration of the state's urban population in a few large hubs, which act as central points for the state's economic and social activity.

Click Here to Buy book on Amazon